

Kodiak Management Area Harvest Strategy for the 2010 Commercial Salmon Fishery

by

James Jackson

and

Joe Dinnocenzo

April 2010

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mideye to fork	MEF
gram	g	all commonly accepted		mideye to tail fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.	Mathematics, statistics	
meter	m			<i>all standard mathematical</i>	
milliliter	mL	at	@	<i>signs, symbols and</i>	
millimeter	mm	compass directions:		<i>abbreviations</i>	
		east	E	alternate hypothesis	H _A
Weights and measures (English)		north	N	base of natural logarithm	<i>e</i>
cubic feet per second	ft ³ /s	south	S	catch per unit effort	CPUE
foot	ft	west	W	coefficient of variation	CV
gallon	gal	copyright	©	common test statistics	(F, t, χ^2 , etc.)
inch	in	corporate suffixes:		confidence interval	CI
mile	mi	Company	Co.	correlation coefficient	
nautical mile	nmi	Corporation	Corp.	(multiple)	R
ounce	oz	Incorporated	Inc.	correlation coefficient	
pound	lb	Limited	Ltd.	(simple)	r
quart	qt	District of Columbia	D.C.	covariance	cov
yard	yd	et alii (and others)	et al.	degree (angular)	°
		et cetera (and so forth)	etc.	degrees of freedom	df
Time and temperature		exempli gratia		expected value	<i>E</i>
day	d	(for example)	e.g.	greater than	>
degrees Celsius	°C	Federal Information		greater than or equal to	≥
degrees Fahrenheit	°F	Code	FIC	harvest per unit effort	HPUE
degrees kelvin	K	id est (that is)	i.e.	less than	<
hour	h	latitude or longitude	lat. or long.	less than or equal to	≤
minute	min	monetary symbols		logarithm (natural)	ln
second	s	(U.S.)	\$, ¢	logarithm (base 10)	log
		months (tables and		logarithm (specify base)	log ₂ , etc.
Physics and chemistry		figures): first three		minute (angular)	'
all atomic symbols		letters	Jan,...,Dec	not significant	NS
alternating current	AC	registered trademark	®	null hypothesis	H ₀
ampere	A	trademark	™	percent	%
calorie	cal	United States		probability	P
direct current	DC	(adjective)	U.S.	probability of a type I error	
hertz	Hz	United States of		(rejection of the null	
horsepower	hp	America (noun)	USA	hypothesis when true)	α
hydrogen ion activity	pH	U.S.C.	United States	probability of a type II error	
(negative log of)			Code	(acceptance of the null	
parts per million	ppm	U.S. state	use two-letter	hypothesis when false)	β
parts per thousand	ppt,		abbreviations	second (angular)	"
	‰		(e.g., AK, WA)	standard deviation	SD
volts	V			standard error	SE
watts	W			variance	
				population	Var
				sample	var

FISHERY MANAGEMENT REPORT NO. 10-16

**KODIAK MANAGEMENT AREA HARVEST STRATEGY FOR THE 2010
COMMERCIAL SALMON FISHERY**

by

James Jackson

Alaska Department of Fish and Game, Division of Commercial Fisheries, Kodiak

and

Joe Dinnocenzo

Alaska Department of Fish and Game, Division of Commercial Fisheries, Kodiak

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1565

April 2010

The Fishery Management Reports series was established in 1989 by the Division of Sport Fish for the publication of an overview of management activities and goals in a specific geographic area, and became a joint divisional series in 2004 with the Division of Commercial Fisheries. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: <http://www.sf.adfg.state.ak.us/statewide/divreports/html/intersearch.cfm>. This publication has undergone regional peer review.

James Jackson
Alaska Department of Fish and Game, Division of Commercial Fisheries,
211 Mission Road, Kodiak, AK 99615, USA

and

Joe Dinnocenzo
Alaska Department of Fish and Game, Division of Commercial Fisheries,
211 Mission Road, Kodiak, AK 99615, USA

This document should be cited as:

Jackson, J., and J. Dinnocenzo. 2010. Kodiak management area harvest strategy for the 2010 commercial salmon fishery. Alaska Department of Fish and Game, Fishery Management Report No. 10-16, Anchorage.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526

U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240

The department's ADA Coordinator can be reached via phone at the following numbers:

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648,

(Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact:

ADF&G Division of Sport Fish, Research and Technical Services, 333 Raspberry Road, Anchorage AK 99518 (907) 267-2375.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ii
LIST OF FIGURES.....	ii
LIST OF APPENDICES	ii
ABSTRACT	1
INTRODUCTION.....	1
HARVEST PROJECTIONS.....	2
FISHING PERIODS.....	2
Advance Notice	2
Fishery Opening Times	3
Timing and Length of Initial Fishing Periods.....	3
Sockeye Salmon.....	3
Pink Salmon.....	7
Chum Salmon	8
Coho Salmon	8
Inperiod Closures.....	9
INSEASON FISHERY ANNOUNCEMENTS	9
ADF&G STAFF CONTACT NUMBERS	10
NOTABLE REGULATIONS AND CHANGES TO REGULATIONS MADE DURING THE 2008 BOARD OF FISHERIES MEETING	10
Multiple Set Net Permits	10
Increase To Shoreward Zones	11
Closed Water Areas.....	11
Closed Water Sanctuary for the 2010 Season.....	12
New Statistical Areas.....	12
Release of Large Chinook (King) Salmon by Purse Seine Fishermen	12
Use of Net Pens	12
Waste of Salmon.....	12
Personal Use of Commercially Taken Salmon (Home Pack)	13
Direct Marketing	13
Fish Transporters	13
FISH TICKETS / HARVEST REPORTS	14
Processors / Tenders	14
Purse Seine Fishermen.....	14
Set Gillnet Fishermen	14
REFERENCE CITED.....	15
TABLES.....	17
FIGURES	21
APPENDIX A. CHARTS OF AVERAGE RUN TIMING RELATIVE TO CURRENT ESCAPEMENT GOALS FOR SELECT STREAMS AND SPECIES	31

LIST OF TABLES

Table	Page
1. Alaska Board of Fisheries approved fishery management plans for the Kodiak Management Area, 2010.....	18
2. Actual versus projected 2009 commercial salmon harvest, by species and fishery, and 2010 harvest projections, for the Kodiak Management Area.....	19

LIST OF FIGURES

Figure	Page
1. Map of the Kodiak Management Area identifying commercial salmon fishing districts.	22
2. Map of the Mainland District identifying commercial salmon fishing sections and statistical areas.	23
3. Map of the Alitak District identifying commercial salmon fishing sections and statistical areas.	24
4. Map of the Southwest Kodiak District identifying commercial salmon fishing sections and statistical areas.....	25
5. Map of the Afognak District identifying commercial salmon fishing sections and statistical areas.	26
6. Map of the Northwest Kodiak District identifying commercial salmon fishing sections and statistical areas.....	27
7. Map of the Eastside Kodiak District identifying commercial salmon fishing sections and statistical areas.....	28
8. Map of the Northeast Kodiak District identifying commercial salmon fishing sections and statistical areas.....	29
9. Commercial salmon fishery chronology by species, for the Kodiak Management Area.....	30

LIST OF APPENDICES

Appendix	Page
A1. Average run timing relative to lower and upper escapement goals for Chinook salmon into the Karluk system.....	32
A2. Average run timing relative to lower and upper escapement goals for early-run sockeye salmon into the Karluk system.....	33
A3. Average run timing relative to lower and upper escapement goals for late-run sockeye salmon into the Karluk system.....	34
A4. Average run timing relative to lower and upper escapement goals for Chinook salmon into the Ayakulik system.	35
A5. Average run timing relative to lower and upper escapement goals for sockeye salmon into the Ayakulik system.	36
A6. Average run timing relative to lower and upper escapement goals for early-run sockeye salmon into the Upper Station system.	37
A7. Average run timing relative to lower and upper escapement goals for late-run sockeye salmon into the Upper Station system.	38
A8. Average run timing relative to lower and upper escapement goals for sockeye salmon into the Frazer system through the Dog Salmon River weir.....	39
A9. Average run timing relative to lower and upper escapement goals for sockeye salmon into the Litnik system.....	40
A10. Average run timing relative to lower and upper escapement goals for sockeye salmon into the Buskin system.....	41
A11. Average run timing relative to lower and upper escapement goals for sockeye salmon into the Sallery system.....	42

ABSTRACT

The Alaska Department of Fish and Game will manage the commercial salmon fisheries in the Kodiak Management Area (KMA) to promote maximum sustained yield (MSY) for future KMA salmon returns by achieving salmon escapement goals and providing opportunity to harvest salmon in excess of those goals. In addition, the department will attempt to provide for orderly fisheries while maximizing harvest opportunities on the highest quality salmon. The department will adhere to the biological and allocative requirements of the management plans adopted by the Alaska Board of Fisheries for the KMA. Management of the fisheries follows a general chronology based on the run timing of four commercially targeted salmon species: sockeye *Oncorhynchus nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum *O. keta* salmon.

The 2010 preseason forecasts project a harvest of approximately 2,492,000 sockeye, 413,000 coho, 11,400,000 pink, and 1,017,000 chum salmon. Additionally, about 20,000 Chinook salmon *O. tshawytscha* could be harvested incidentally in fisheries targeting other salmon species. All fishing periods are established by emergency order. The initial sockeye salmon commercial test fishing period for the west side of Kodiak Island is tentatively scheduled for June 9. A June 9 fishery opening is also planned for the Duck Bay Section and the Foul Bay and Waterfall Bay Special Harvest Areas. The initial commercial test fishing period in the Alitak District may occur on June 9, which would be announced no later than June 5. The actual opening date for the Alitak District will be determined based on inseason indicators of run strength. On July 6, the weekly fishing period targeting pink salmon will be 57 hours (2½ days), followed by 81 hours (3½ days) on July 13, and 81 hours on July 20 for Kodiak Archipelago sections and 57 hours per week for Mainland District sections north of Cape Aklek.

Key Words: Alaska Department of Fish and Game, Kodiak, Afognak, Alaska Peninsula, Karluk, Ayakulik, Frazer, Upper Station, Alitak, Cape Igvak, North Shelikof, commercial fishery, salmon, management plan, purse seine, set gillnet, KMA, Chinook salmon, *Oncorhynchus tshawytscha*, sockeye salmon, *O. nerka*, coho salmon, *O. kisutch*, pink salmon, *O. gorbuscha*, chum salmon, *O. keta*

INTRODUCTION

The Kodiak Management Area (KMA; Figure 1) 2010 commercial salmon fishery harvest strategy emphasizes the following three criteria:

- (1) Promote maximum sustained yield (MSY) for future KMA salmon returns by ensuring salmon escapements of sufficient magnitude and distribution.
- (2) Provide for orderly fisheries while maximizing harvest opportunities on the highest quality salmon.
- (3) Adhere to the biological and allocative requirements of all management plans adopted by the Alaska Board of Fisheries (BOF) for the KMA salmon fishery.

There are 10 salmon management plans that direct Alaska Department of Fish and Game (ADF&G) management activities for specific portions and time periods of the KMA (Table 1). Within the KMA there are 7 districts which are further broken down into sections and statistical areas (Figures 2-8). All salmon fishing districts within the KMA are managed by regulatory plans for the entire season. Proper implementation of these plans requires a major effort in communication between ADF&G and fishing industry personnel.

Salmon run timing within the KMA follows a general chronology by species (Figure 9). Commercial fisheries management is based on the run timing of four targeted salmon species: sockeye *Oncorhynchus nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum salmon *O. keta*. Commercial salmon fisheries are structured around the seasonal abundance of salmon. Inseason adjustment in areas open to fishing and fishing time are dictated by escapement goals (Honnold et al. 2007).

The KMA salmon fisheries are managed with data that are compiled and evaluated daily. These data include escapement information from weir counts and/or aerial, boat, and foot surveys, and total catch and fishery performance trends over time.

Management of major sockeye salmon runs is based on escapement, and utilizes daily escapement information from salmon counting weirs on seven of the larger streams (Appendices A1–A11). Due to inadequate funding, ADF&G now relies on inseason aerial survey counts on smaller streams. For many of these small systems aerial survey counts are not available until sockeye salmon begin to move into their spawning streams. This means that escapement data is obtained much later in the season. Due to this lag in timing, the department employs a more conservative management approach which includes increased closed water areas and reduced fishing time. These management actions will likely occur for systems that have the potential to be overharvested or have shown signs of overharvest in previous years.

The length of the initial fishing periods for pink salmon are determined preseason based on the magnitude of the pink salmon forecast. Adjustments in weekly fishing time and areas open to fishing will occur as the actual run strength becomes apparent through assessment of harvest and escapement estimates.

Initially, chum and coho salmon are incidentally harvested in fisheries directed at sockeye or pink salmon. Terminal or near-terminal fisheries targeting chum or coho salmon will be managed based on an assessment of actual run strength and current harvest information.

Commercial fisheries are not currently directed toward surplus Chinook salmon *O. tshawytscha*. Incidental harvests of Chinook salmon occur during directed sockeye and pink salmon fisheries.

HARVEST PROJECTIONS

Based on preseason projections, a total of approximately 20,000 Chinook, 2,491,584 sockeye, 413,108 coho, 11,400,000 pink, and 1,016,668 chum salmon could be available for harvest throughout the KMA in 2010 (Table 2).

Of this total, the Kodiak Regional Aquaculture Association (KRAA) has forecasted the harvest of salmon returning to the Kitoi Bay Hatchery to be approximately 71,244 sockeye, 5,700,000 pink, 273,668 chum, and 155,108 coho salmon (Table 2). In 2010, KRAA will conduct a cost recovery fishery in the Inner and Outer Kitoi Bay sections. The desired cost recovery harvest will be less than the 2009 season (2.29 million salmon) with an anticipated harvest of 4.35 million pounds of pink salmon (approximately 1.16 million salmon). Additional enhanced salmon production, from projects conducted by KRAA and ADF&G, are expected to contribute about 206,400 sockeye salmon to the common property fisheries (e.g., Spiridon Lake, Hidden Lake, etc.; Table 2). In 2010, KRAA will also conduct a cost recovery fishery in the Spiridon Bay Special Harvest Area (SHA). The desired cost recovery harvest is anticipated to be 50,000 pounds of sockeye salmon (approximately 10,000 salmon).

FISHING PERIODS

All fishing periods will be established by emergency order (EO).

ADVANCE NOTICE

For the initial sockeye salmon fisheries from June 1 through June 14, there will be at least 42 hours advance notice. All subsequent fishing periods will have at least 18 hours advance notice.

For the opening of the Cape Igvak Section (Figure 2) fishery, there will be at least 24 hours advance notice. For the openings in the Inner or Outer Akalura, Inner or Outer Upper Station, or Dog Salmon Flats sections (Figure 3), there will be at least 24 hours advance notice. For adjustments to closed waters (decrease), there will be at least 18 hours advance notice.

For extension of a previously announced fishing period, or for in-period closure of an announced fishing period, there will be at least three hours advance notice.

FISHERY OPENING TIMES

Most fishing periods through August 15 open at noon and close at 9:00 PM. Beginning on August 16, most fishing periods will close at 6:00 PM instead of 9:00 PM.

There are several exceptions to this opening/closure schedule:

- Cape Igvak fisheries open at 12:01 AM and close at 12:01 AM from June 1 through July 25. The 12:01 AM opening and closure time allows for more orderly fisheries due to the possibility of relatively short notice given for extensions of fishing periods.
- Except for the initial commercial test fishing period (June 1 through June 13), Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay section (Figure 3) fisheries will begin and end at different times through September 15, as follows:
- In the Olga Bay Section, fishing periods open at 6:00 AM and close at 9:00 AM the following day¹. In the Moser Bay Section, fishing periods open at noon and close at 3:00 PM the following day¹. In the Alitak Bay Section, fishing periods open at 6:00 PM and close at 9:00 PM the following day¹. In the Cape Alitak Section, fishing periods open at 6:00 AM the day following the openings of the Olga Bay, Moser Bay, and Alitak Bay sections, and close at 9:00 AM the following day¹ (5 AAC 18.361).
- The Humpy-Deadman Section opens and closes at the same time as the Cape Alitak Section through July 15. From July 16 through August 15, fishing periods open at noon and close at 9:00 PM. Beginning on August 16, most fishing periods will close at 6:00 PM, instead of 9:00 PM.
- Inner Ayakulik Section (Figure 4) fisheries usually begin at approximately low tide. These will be daylight openings, and fishing begins when ADF&G personnel, located on the bluff northeast of the Ayakulik River mouth, launch a flare. When such openings occur, the opening time for the Outer Ayakulik Section may be adjusted to coincide with the Inner Ayakulik Section.
- The Inner Kitoi Bay Section (Figure 5) common property fisheries will usually begin between noon and 12:30 PM, when a flare is launched by hatchery staff within inner Kitoi Bay.

TIMING AND LENGTH OF INITIAL FISHING PERIODS

Sockeye Salmon

The first commercial salmon fishing period could begin as early as Tuesday June 1, 2010 but most fisheries are likely to open on Wednesday June 9.

¹ Extensions are possible; any extension to fishing time will be in 24-hour increments.

Initial Commercial Fisheries

Cape Igvak Section of the Mainland District (Figure 2).

Chignik sockeye salmon are considered, by regulation, the principal stock harvested in the Cape Igvak Section from June 1 to July 25. The timing of initial commercial fisheries in the Cape Igvak Section depends on the evaluation of the Chignik sockeye salmon run strength. The first Cape Igvak fishery may occur beginning June 1. Fishing periods in the Cape Igvak Section will be in 24-hour increments, beginning at 12:01 AM (5 AAC 18.360).

June 9 Commercial Fisheries

Commercial salmon fishing is expected to begin at noon Tuesday June 9, 2010, in the following management areas:

The Central and North Cape sections of the Northwest Kodiak District (Figures 6).

For these sections, a 33-hour commercial test fishing period will be conducted from noon Wednesday June 9 through 9:00 PM Thursday June 10. An extension of this period will depend on escapement buildups in Karluk Lagoon. The commercial catch from this period will be used to assess the strength of the sockeye salmon run to the Karluk system, with consideration of the Ayakulik, Frazer (Dog Salmon), and Upper Station sockeye salmon runs (5 AAC 18.362).

Anton Larsen, Sharatin Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, Kizhuyak, and Uyak Bay sections of the Northwest Kodiak District (Figure 6).

These sections are likely to open at noon Wednesday June 9, for a 33-hour commercial test fishing period. Management of these sections is based on local chum or sockeye salmon runs. Openings in these sections must open concurrently with fishing periods in the Central and North Cape sections (5 AAC 18.362).

The Foul Bay and Waterfall Bay Special Harvest Areas and Duck Bay Section of the Afognak District (Figure 5)

These fisheries are likely to open at noon Wednesday June 9, and will remain open until further notice (5 AAC 18.365).

Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, and Olga Bay sections of the Alitak District (Figure 3).

It is anticipated these fisheries will open at noon Wednesday June 9 as a commercial test fishing period, depending on early indications of sockeye salmon run strength to Frazer and Upper Station. If a commercial test fishing period is allowed on June 9, it will be announced no later than June 5, and shall be no more than 33 hours in length, with no extension to fishing time. All sections would open and close concurrently, from noon Wednesday June 9 through 9:00 PM Thursday June 10 (5 AAC 18.361).

Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections (Figure 5).

These fisheries are likely to open at noon Wednesday June 9. Most openings will remain open until further notice. The fishery for the Kitoi Bay Hatchery early chum salmon runs may extend through late June (5 AAC 18.365).

June 14 to June 21 Commercial Fisheries

Commercial fisheries in the following management units may also occur on or after June 14, if escapement objectives are met or exceeded.

The Central and North Cape sections of the Northwest Kodiak District (Figure 4 and 6).

For these sections, a 33-hour commercial test fishing period will occur from noon Monday June 14 through 9:00 PM Tuesday June 15. An extension of this period will depend on escapement buildups in Karluk Lagoon. The commercial catch from this period will be used to assess the strength of the sockeye salmon run to the Karluk system, with consideration of the Ayakulik, Frazer (Dog Salmon), and Upper Station sockeye salmon runs (5 AAC 18.362).

Anton Larsen, Sharatin Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, Kizhuyak and Uyak Bay sections of the Northwest Kodiak District (Figure 6).

These sections may open at noon Monday June 14 as a 33-hour commercial test fishing period (5 AAC 18.362).

Southwest Afognak, Perenosa Bay, Pauls Bay, and Northwest Afognak sections of the Afognak District (Figure 5) Eastside Kodiak District (Figure 7) Big River and Outer Kukak Bay sections of the Mainland District (Figure 2).

Commercial salmon fishing will open at noon Monday, June 14 for a 33-hour fishing period. This initial fishing period targets early-run sockeye salmon bound for Pauls, Portage, Thorsheim, Long Lagoon, Saltery, Pasagshak, Ocean Beach, Swikshak, and/or Kaflia systems. A second fishing period for minor sockeye salmon systems should occur on Monday, June 21 (5 AAC 18.362; 5 AAC 18.367; 5 AAC 18.368; 5 AAC 18.369).

Spiridon Bay Special Harvest Area (Telrod Cove; Figure 6).

The initial commercial salmon fishing period targeting enhanced sockeye salmon returning to Telrod Cove is not expected to occur until after a cost recovery fishery has been initiated to help KRAA fund this project. The actual starting date will depend on the salmon buildups in Telrod Cove, ADF&G's ability to monitor the commercial fisheries (5 AAC 18.366), and the progress of the cost recovery harvest.

Inner and Outer Ayakulik sections of the Southwest Kodiak District (Figure 4) and the Southeast Afognak Section of the Afognak District (Figure 5).

The initial fishing period in the Inner and Outer Ayakulik sections and the Southeast Afognak Section is solely dependent on sockeye salmon escapement to the Ayakulik (Red) or Afognak (Litnik) systems, respectively (5 AAC 18.362).

Additional fishing time from mid June to early July will be based on sockeye salmon run strength as determined by salmon escapement counts, salmon buildups, and fishery performance. In order to maintain sockeye salmon escapements within established goal ranges, commercial fishing may be extended or curtailed.

Directed commercial fisheries within the Inner Karluk Section are solely dependent on Karluk River sockeye salmon escapement, and are only expected to occur if it appears likely that either the early-run or late-run Karluk sockeye salmon escapement goal would be exceeded.

For most late-run sockeye salmon stocks, a portion of the harvestable surplus is taken during fishing periods targeting pink salmon. Consequently, a blended management strategy is needed to ensure that escapements for each species are achieved. Commercial fisheries targeting Upper Station late-run sockeye salmon may begin August 10 and fisheries targeting Karluk late-run sockeye salmon may begin August 16 (5 AAC 18.362).

Pink Salmon

In addition to the three management criteria identified in the introduction of this document, the KMA harvest strategy for pink salmon also utilizes

- a fixed opening date (July 6),
- pink salmon forecasts to set the length of the initial fishing periods, and
- coordination of multiple fisheries, whenever possible, to disperse the purse seine fleet.

The initial pink salmon fishing period will be 57 hours in length, including the Mainland District fisheries. From July 6 to July 25, fishing time for that portion of the Mainland District north of Cape Aklek will not exceed 57 hours per week (this does not include the Cape Igvak or Wide Bay sections, which are managed in accordance with the Cape Igvak Salmon Management Plan; 5 AAC 18.360). During the peak harvest period, from late July to mid August, fishing periods may be adjusted to match the actual strength of the pink salmon run.

The following schedule of pink salmon fishing periods for the 2010 season is provided for industry planning purposes. Changes to the following schedule should be expected if the perceived pink salmon run strength is weaker or stronger than forecasted. No extensions will occur during the first two periods. Extensions to later fishing periods may occur.

First Period: 57 hours – from noon Tuesday, July 6 through 9:00 PM Thursday, July 8. Harvests during this initial period provide important data to assess early run strength of KMA pink and chum salmon stocks. There will be no extension in fishing time following this period. In the Mainland District north of Cape Aklek this period will be 57 hours, from noon Tuesday July 6 through 9:00 PM Thursday July 8.

Second Period: 81 hours – from noon Tuesday, July 13 through 9:00 PM Friday, July 16. During the second period, run strength for both pink and chum salmon will again be assessed from harvest data. There will be no extension in fishing time following this period. In the Mainland District north of Cape Aklek this period will be 57 hours, from noon Tuesday, July 13 through 9:00 PM Thursday, July 15.

Third Period: 81 hours – from noon Tuesday, July 20 through 9:00 PM Friday, July 23. The previous closures will likely allow an influx of pink and chum salmon into terminal closed areas, resulting in the buildup of potential escapement. At this time, a combination of harvest and early escapement and/or buildup information should provide an indication of the actual run strength for major pink salmon stocks. If the pink salmon run is strong, extensions in fishing time may occur if escapements are sufficient within the systems. In the Mainland District north of Cape Aklek, this period will be 57 hours, from noon Tuesday, July 20 through 9:00 PM Thursday, July 23. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay sections, fishery restrictions may occur to meet hatchery cost recovery needs.

Fourth Period: 81 hours – from noon Tuesday, July 27 through 9:00 PM Friday, July 30. During this period the total run strength should be evident by the end of the period. The pink salmon harvest has traditionally increased during this period. If the pink salmon run is strong, extensions in fishing time will occur. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay sections, fishery restrictions may occur to meet hatchery cost recovery needs.

Subsequent fishing periods will likely follow the same weekly pattern through August, unless escapement information indicates that an extension or reduction of fishing time is necessary. Fishing time will be based on pink salmon returns to individual systems. Differential fishing time, by management unit, may occur as stronger production areas are targeted, while moderate or lower production areas are provided additional protection. There may be changes in closed water sanctuaries to increase escapement levels or to harvest surplus salmon.

From approximately August 1 through August 16, there will be cost recovery fisheries for the Kitoi Bay Hatchery. These cost recovery fisheries will primarily occur within the Inner Kitoi Bay Section, but may also expand into the Outer Kitoi Bay Section. There may be restricted fishing time in the Izhut Bay and Duck Bay sections during this time period, to allow fish to move into the Kitoi Bay sections for cost recovery and broodstock needs.

Chum Salmon

The supplemental Kitoi Bay Hatchery chum salmon run is projected to be weak to moderate in 2010 (Table 2). Limited amounts of fishing time in the vicinity of the hatchery should begin June 9 and could extend into early July.

With the exception of chum salmon returning to the Kitoi Bay Hatchery, a major portion of the 2010 chum salmon harvest will occur in non-terminal locations during directed sockeye and pink salmon fisheries. The initial fishing periods targeting chum salmon will begin on July 6, and will follow the same opening dates and times as those for pink salmon. System-specific chum salmon fisheries that occur during the pink salmon fishery may result in some management units (such as the Kizhuyak Bay, Terror Bay, Uganik River, Uyak River, Sturgeon, Spiridon Bay, Zachar Bay, Inner or Outer Kukak Bay, or Outer Ugak Bay sections) having more or less fishing time than those targeting primarily pink salmon stocks. Additional fishing time after July 25 for that portion of the Mainland District north of Dakavak Bay will depend on assessment of local pink, chum, and coho salmon runs. Chum salmon run strength will be assessed primarily from aerial surveys and harvest data.

Coho Salmon

Initially, coho salmon harvests will occur in non-terminal locations during directed pink salmon fisheries. System-specific coho salmon fisheries may occur during the pink salmon fishery, and may result in some management units having more or less fishing time than those primarily targeting pink salmon stocks (such as the Pauls Bay, Perenosa Bay, or Inner Ayakulik sections). Coho salmon run strength will be assessed from weir escapements, aerial surveys, foot surveys, and harvest data.

Directed coho salmon fisheries may begin on August 1 in both the Pauls Bay and Shuyak Island sections. The supplemental Kitoi Bay Hatchery coho salmon run has been successful over the past several years, and is projected to be strong again this season (Table 2). Additional fishing time in the vicinity of the hatchery may occur in early September after pink salmon broodstock requirements are ensured. After September 10, coho salmon fishing may be allowed in the Settler Cove Special Harvest Area, if at least 500 coho salmon are available for harvest (statistical area 259-35; Figure 6).

INPERIOD CLOSURES

From July 6 through July 25, there are limits on the number of sockeye salmon that may be harvested in areas bordering the North Shelikof Strait (5 AAC 18.363). Purse seine permit holders operating in the North Shelikof Strait from July 6 to July 25 are advised that inperiod closures of designated Seaward Zones will occur in the likely event the harvest of sockeye salmon approach these limits (Figure 5; 5 AAC 18.360). Since the plan went into effect in 1990, Seaward Zone closures have occurred every year except 1991, 2000, and 2008.

Seaward Zone closures, if required, will be announced on single side band radio (SSB) frequency 3.230 MHz, from the ADF&G office in Kodiak, and on VHF 6 from the *R/V K-Hi-C* on the fishing grounds. Inperiod Seaward Zone closures announcement times will be 8:30 AM, 10:00 AM, 2:00 PM, 5:00 PM, or 8:00 PM. There will be at least 3 hours advance notice given for Seaward Zone closures.

INSEASON FISHERY ANNOUNCEMENTS

After enough information has been collected to determine an appropriate amount fishing time to harvest surplus fish, a fishery announcement or News Release (NR) will be issued as follows:

- (1) The NR will include:
 - (a) the date, time, and number of the E.O. announcement,
 - (b) the length of the fishing period,
 - (c) the opening and closing times and dates of the fishing period,
 - (d) the areas opening to fishing,
 - (e) the areas closing to fishing,
 - (f) the location of closed water adjustments (if any), and
 - (g) a list of any previous NR information that is still pertinent.
- (2) The NR will be posted at the main entrance of the Kodiak ADF&G office at 211 Mission Road. Copies of the NR will be available outside the main entrance, in the Kodiak ADF&G office during regular office hours (Monday through Friday, 8:00 AM to 4:30 PM), and posted at the Region IV commercial salmon fishery web site at <http://www.cf.adfg.state.ak.us/region4/finfish/salmon/salmhom4.php>.
- (3) The NR will be recorded on a 24-hour recorded message phone (486-4559).
- (4) The NR will be made available to local radio stations (KVOK 560 AM, KRXX 101.1 FM and KMXT 100.1 FM).
- (5) The Kodiak ADF&G management staff will monitor SSB radio channel 3.230 MHz (call sign WON 32), and Matrix satellite phone dispatch number 7410, during regular office hours, and will reply to public and industry inquiries when available.
- (6) The NR will be distributed to all registered processors by fax, email, telephone, hand delivery, or through the ADF&G recorded message phone.
- (7) Copies of EOs, which detail specific regulation changes and justifications, will be available upon request.

NRs are generally very detailed and complicated. It is advised that tender operators and permit holders obtain a written copy, or use a tape recorder to document the exact wording of each announcement as it is broadcast.

ADF&G STAFF CONTACT NUMBERS

ADF&G Kodiak management staff is available to answer questions regarding commercial salmon fishery regulations, openings, closures, and harvests. Contact phone numbers and e-mail address are as follows:

General Information - 486-1830

James Jackson - 486-1808
Area Management Biologist

After hours 942-2097

Matrix Dispatch - 7410

Joe Dinnocenzo - 486-1807
Assistant Area Management Biologist

After Hours Cell Phone – 942-5014

Record-a-Phone - 486-4559

Geoff Spalinger - 486-1804
Assistant Area Management Biologist

After Hours Cell Phone – 942-4822

Email -
dfg.dcf.kodiaksalmon@alaska.gov

Iris Caldentey - 486-1810
Fisheries Biologist

NOTABLE REGULATIONS AND CHANGES TO REGULATIONS MADE DURING THE 2008 BOARD OF FISHERIES MEETING

The Alaska Board of Fisheries (BOF) met in Kodiak during January 2008 to discuss Kodiak salmon fishery regulations. Changes were made that will be in effect for the 2010 commercial salmon fishery. A synopsis of several important regulations and regulation changes follows, but all participants in the Kodiak commercial salmon fishery are urged to make themselves aware of all applicable regulations. Copies of the KMA commercial salmon fishery regulations and the most recent Kodiak Area Salmon Statistical Chart are available at the Kodiak ADF&G office.

MULTIPLE SET NET PERMITS

During the 2008 BOF meeting for the KMA, a new regulation (5 AAC 18.331 (j)) was adopted to allow a CFEC permit holder with two Kodiak set gillnet permits to fish with both permits. This permit holder may operate no more than four set gillnets, with no more than 300 fathoms of set gillnet in aggregate. No set gillnet may be more than 150 fathoms in length. Both of the permit holder's five digit CFEC permit serial numbers followed by the letter "D" to identify the gillnet as a dual permit set gillnet must be located on the identification buoy and site markers required by 5 AAC 39.280. At least one cork every 10 fathoms along the cork line must be plainly and legibly marked with both CFEC permit numbers of the permit holder. All identifiers must be displayed in a manner

that is plainly visible and unobscured, and have permanent symbols in a color that contrasts with the background. This regulation has a sunset clause and is only in effect until December 31, 2010.

INCREASE TO SHOREWARD ZONES

The shoreward zone of the Northwest Afognak Section of the Afognak District was increased and is now described as south and east of a line from one-half mile west of the northern entrance of Big Bay at 58° 33.85' N. lat., 152° 40.30' W. long., to one-half mile west of the western entrance of Blue Fox Bay at 58° 27.68' N. lat., 152° 43.65' W. long., to one-half mile west of Black Cape at 58° 24.50' N. lat., 152° 53.30' W. long., to one-half mile west of Cape Paramanof at 58° 18.33' N. lat., 153° 02.65' W. long (5 AAC 18.363(b)(3)(C); Figure 5).

CLOSED WATER AREAS

All freshwater streams and rivers of the KMA are closed to commercial salmon fishing. Additionally, commercial fishing is allowed seaward of the exposed tidal bank adjacent to all streams and rivers in the KMA unless:

- (1) Alternatives are specifically listed in the regulation book (see 5 AAC 18.350. CLOSED WATERS); or
- (2) The stream number is un-circled on the most recent version of the KMA salmon statistical chart issued annually by ADF&G. For streams with un-circled numbers, all saltwater within 500 yards of the seaward extremities of the exposed tidal banks are closed to commercial salmon fishing.
- (3) Closed water areas are specifically reduced or increased inseason by EO at a particular stream or bay (announced by NR); or
- (4) Closed waters markers are in place. The intent is to maintain a 500-yard closed water area from the stream terminus, at all stages of the tide, unless the area is made larger or smaller by regulation or EO. If closed waters markers are in place, the closure line may be a straight line or may be an arc, as follows:
 - (a) The closure line is a straight line between two regulatory markers if specifically stated in regulation or EO, or if at all stages of the tide, the markers are farther than 500 yards from the seaward extremities of the exposed tideland banks of the salmon streams located inside the markers.
 - (b) The closed water line will be an arc if necessary to maintain the 500-yard distance from the seaward extremities of the exposed tideland banks of the salmon stream at any stage of the tide. Then, waters closed to salmon fishing will be a line arcing from the markers to a point 500 yards directly off the seaward extremities of the exposed tideland banks that designates the stream mouth. The actual shape of the closed water area will change as the tide ebbs and floods.

As stated in 5 AAC 18.350. CLOSED WATERS. (b). If the location of a regulatory marker is in conflict with the closed waters listed in this section, it is illegal to fish on the stream-ward side of that marker. There will be no in-season adjustments of closed water markers unless ADF&G personnel are available to remove the normal markers, install new markers, and subsequently reinstall the normal markers. There will be at least 18 hours advance notice prior to adjusting closed waters.

Closed Water Sanctuary for the 2010 Season

In addition to the closed water areas listed in the regulations (5 AAC 18.350), the following closed water sanctuary will be in effect for the 2010 season:

Ayakulik River Closed Water Sanctuary

Should commercial fishing be allowed in the Inner Ayakulik Section, ADF&G regulatory markers will be placed in such a manner as to better define the stream terminus of the Ayakulik River. One marker shall be placed on each side of the river mouth. Waters closed to salmon fishing will be a line arcing from the markers to a point 500 yards directly off the seaward extremities of the exposed tideland banks that designates the stream mouth. The intent of this closed water sanctuary is to prevent fishing gear from being set to completely block access to the river for migrating fish.

NEW STATISTICAL AREAS

There are several statistical area number changes to the KMA statistical chart. It is important that permit holders have the most recent statistical chart (March 2008) and take note of the new numerical designations for many of the inner bay statistical numbers.

RELEASE OF LARGE CHINOOK (KING) SALMON BY PURSE SEINE FISHERMEN

ADF&G may require commercial fishermen to release large Chinook salmon (greater than 28 inches in length) from their catch. If ADF&G does require the release of Chinook salmon, any Chinook salmon greater than 28 inches would have to be released unharmed, immediately. This would apply only in the Inner Karluk, Outer Karluk, Inner Ayakulik, or Outer Ayakulik sections, and only if the department determines that the Karluk or Ayakulik Chinook salmon runs will not likely meet seasonal escapement goals (5 AAC 18.395).

USE OF NET PENS

Floating net pens may be used in the KMA to hold live, commercially caught salmon prior to processing. However, fishermen that choose to use a net pen to hold live salmon must obtain a permit at the Kodiak ADF&G office (5 AAC 18.392). The permit will outline restrictions, conditions, and reporting requirements. It is the responsibility of the permit holder to obtain any additional licenses or permits that may be required. Any fishermen that wish to use a net pen should contact salmon management staff at the Kodiak Fish and Game office.

WASTE OF SALMON

Waste of salmon will not be tolerated and may result in fishing period closures (AS 16.05.831 and 5 AAC 93.310). Unless prohibited by law, salmon taken commercially may be used or sold as bait (5 AAC 93.350).

PERSONAL USE OF COMMERCIALY TAKEN SALMON (HOME PACK)

Commercial fishermen may keep salmon legally taken in their commercial gear during open commercial fishing periods for their own use (home pack). However, the number of fish harvested and kept for home pack must be reported on a fish ticket. These fish may not be sold or bartered (5 AAC 39.010).

At the time of delivery, record the number of each species of salmon caught but not sold in the lower right hand corner of the fish ticket, in the space designated for that purpose.

DIRECT MARKETING

There has been an increase in interest by Kodiak commercial salmon fishermen to market their own lawfully taken commercial catch (direct marketing). If fish are to be sold later, the commercial fishermen must be properly registered and licensed. There are several ways to legally market your own fish, but some require special registration and licensing. Registration and licensing ensures accurate reporting of harvests, which is essential for sound management of commercial fisheries.

Direct marketers are responsible for filing their own fish tickets with ADF&G and may be required to complete a Commercial Operators Annual Report. Direct marketers must also register with the ADF&G salmon management office in Kodiak.

FISH TRANSPORTERS

A fish transporter differs from a tender. A tender acts as the agent of a registered processor or buyer, and is the first point of sale of fish from the CFEC permit holder to a processor or buyer. A fish transporter is an agent of the CFEC permit holder(s), and is authorized to take legally harvested fish from one or more commercial salmon fisherman to a buyer or buyers. A fisherman or group of fishermen may hire a fish transporter, who may then legally take their fish to the first point of sale.

A Fish Transporter Permit is required, and must be in possession of the operator during the transport and sale of fish. The ADF&G Division of Commercial Fisheries in Juneau issues Fish Transporter Permits. All fish transporters who plan to transport salmon within the KMA must also be registered with the ADF&G Kodiak commercial salmon fishery management staff. The transporting vessel used must be licensed as a commercial fishing vessel and all people working aboard the vessel must have crewmember licenses.

Fish transporters are required to report their activities to ADF&G and to fill out a fish ticket for all fish taken aboard their vessel. The commercial fisherman who caught the salmon is required to provide the fish transporter with fish ticket information such as the CFEC permit number, the area of harvest, catch dates, and catcher vessel ADF&G number, and must sign the fish ticket. The number of fish by species and the weight of the fish by species must be estimated and recorded on the fish ticket. Final weights and fish counts will be verified upon delivery of the fish to the buyer or processor. The buyer or processor submits the finalized fish ticket to ADF&G. Additional information and Fish Transporter Permit applications are available from the ADF&G Kodiak staff.

FISH TICKETS / HARVEST REPORTS

It is the legal responsibility of commercial fishermen, tenders or transporters, and processors and buyers to ensure that all information on a fish ticket is complete and correct. Prior to completing and signing fish tickets, permit holders, tender operators, and/or processing personnel should make sure that the proper statistical area with the correct harvest information has been entered and the fish ticket is complete, legible, and accurate.

PROCESSORS / TENDERS

Management of the KMA commercial salmon fisheries requires timely, accurate harvest reporting. Without accurate information, a more conservative harvest strategy will be adopted and less fishing time will be allowed. Processors and buyers are required to accurately report catches daily to ADF&G (5 AAC 39.130). In order to process the harvest information and use it for management decisions, catch reports must include the estimated number of salmon harvested by species, for each gear type, from each major catch area (by statistical area, or by geographic area such as a bay, cape, or headland). ADF&G management staff will contact processors to arrange the daily reporting times and format. Daily reports can be made verbally, by fax, or by email. Email is the preferred method. Processors should obtain correct, up to date, information from tender operators prior to providing daily reports to ADF&G.

Each day, tender operators must provide their processing companies with an accurate count of deliveries and number of salmon delivered, by species and by catch area. Alternately, tender operators may report, the total number of pounds and the average weight by species, by catch area.

Statistical area numbers are used to record harvest location(s) on fish tickets. Tender operators should ensure that the location of the catch, rather than the location of the tender pick-up, is recorded on the fish ticket.

The correct harvest location and number of fish harvested by species must be recorded on each fish ticket. This information is extremely important in evaluating inseason harvests, stock contribution, and effort distribution. In order to provide maximum allowable fishing time, especially in areas such as the Cape Igvak Section and north Shelikof Strait, it is imperative that the correct statistical areas and numbers of fish by species are reported on the fish ticket at the time of delivery.

PURSE SEINE FISHERMEN

Purse seine fishermen should be certain that their fish tickets show the number of fish of each species, or the total weight and average by species for each delivery. Purse seine permit holders must, at a minimum, provide estimates of harvest by statistical area to tender operators. For example: "1/3 of my sockeye were from Cape Alitak (257-20) and 2/3 were from Outer Ayakulik (256-20). The rest of my fish were 1/2 and 1/2 from each of those two areas". The location of the tender where the fish were delivered should not be used as the harvest location.

SET GILLNET FISHERMEN

Set gillnet fishermen should make sure their fish tickets show the number of fish of each species, or the total and average weight by species for each delivery. Because of the fixed nature of set gillnet gear, each permit holder's reporting area (statistical area) is usually consistent between landings. In the event that a gillnet is moved into a new statistical area, fishermen should make sure that the tender operator is provided with that information.

REFERENCE CITED

Honnold S. G., M. J. Witteveen, M. B. Foster, I. Vining, and J. J. Hasbrouck. 2007. Review of salmon escapement goals for salmon stocks in the Kodiak Management Area, Alaska. Alaska Department of Fish and Game, Fishery Manuscript No. 07-10, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fms07-10.pdf>

TABLES

Table 1.—Alaska Board of Fisheries approved fishery management plans for the Kodiak Management Area, 2010.

Management Plan	Year Initiated	Management Units Affected	Dates in Effect
Cape Igvak Salmon Management Plan (5 AAC 18.360)	1978	Cape Igvak Section Wide Bay Section	6/1 - 7/25
Alitak Bay District Salmon Management Plan (5 AAC 18.361)	1987	Alitak Bay District	6/1 - 10/31
Westside Kodiak Management Plan (5 AAC 18.362)	1990	NW Kodiak District SW Kodiak District SW Afognak Section	6/1 - 10/31
North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363)	1990	SW Afognak Section NW Afognak Section Shuyak Island Section Big River Section Hollo Bay Section Inner and Outer Kukak Bay sections Dakavak Bay Section	7/6 - 7/25
Crescent Lake Coho Salmon Management Plan (5 AAC 18.364)	1990	Special Harvest Area in the Central Section near Port Lions	7/15 - 10/31
Eastside Afognak Management Plan (5 AAC 18.365)	1993	Southeast Afognak Section Raspberry Strait Section Inner and Outer Kitoi Bay sections Duck Bay Section Izhut Bay Section	6/1 - 10/31
Spiridon Lake Sockeye Salmon Management Plan (5 AAC 18.366)	1993	Special Harvest Area in Spiridon Bay Section	6/1 - 10/31
Eastside Kodiak Salmon Management Plan (5 AAC 18.367)	1995	Eastside Kodiak District NE Kodiak District	6/14 - 10/31
North Afognak / Shuyak Island Salmon Management Plan (5 AAC 18.368)	1995	NE Afognak Section Perenosa Bay Section Pauls Bay Section Shuyak Island Section NW Afognak Section	6/1 - 10/31
Mainland District Salmon Management Plan (5 AAC 18.369)	1999	Mainland District	6/14 – 10/31

Table 2.—Actual versus projected 2009 commercial salmon harvest by species and fishery, and 2010 harvest projections for the Kodiak Management Area.

	Chinook	Sockeye	Coho	Pink	Chum	Total
Projected Harvest 2009 ^a	20,000	1,502,492	421,500	22,100,000	623,000	24,666,992
Actual Harvest 2009 ^a	7,219	1,726,971	288,744	27,648,943	955,808	30,627,685
Projected Harvest 2010	20,000	2,491,584	413,108	11,400,000	1,016,668	15,341,360

FISHERY	2009 Harvest		2010 Harvest
	Projection ^b	Actual ^c	Projection ^b
Early Sockeye Salmon Fisheries (6/1-7/15)			
Kitoi Bay Hatchery ^d	29,040	37,233	30,646
Cape Igvak ^e	82,667	0	109,477
Karluk ^f	154,000	194,848	55,000
Ayakulik ^g	19,360	0	294,000
Alitak District ^h	332,000	351,811	176,000
Minor Enhancement ^j	50,200	8,742	30,400
Spiridon ^k	89,670	85,592	88,000
Other ⁱ	110,000	130,410	309,000
Subtotal	866,937	808,636	1,092,523
Late Sockeye Salmon Fisheries (7/16-10/31)			
Kitoi Bay Hatchery ^d	36,960	45,061	40,598
Cape Igvak ^e	35,625	141,076	96,463
Karluk ^f	202,000	231,249	440,000
Ayakulik ^g	24,640	77,762	126,000
Alitak District ^h	142,000	279,501	213,000
Spiridon ^k	93,330	69,433	88,000
Other ⁱ	101,000	74,253	395,000
Subtotal	635,555	918,335	1,399,061
TOTAL SOCKEYE	1,502,492	1,726,971	2,491,584
Pink Salmon Fisheries			
Kitoi Bay Hatchery ^d	10,000,000	8,939,194	5,700,000
Afognak (Wild) ^l	600,000	2,820,154	416,100
Westside Kodiak ^m	4,100,000	3,609,186	4,109,700
Alitak ⁿ	1,200,000	3,996,164	484,500
Eastside/Northend Kodiak ^o	4,700,000	7,652,445	467,400
Mainland ^p	1,500,000	631,800	222,300
Subtotal	22,100,000	27,648,943	11,400,000
Chum Salmon Fisheries			
Kitoi Bay Hatchery ^d	118,000	93,299	273,668
Afognak (Wild) ^l	20,328	50,386	30,000
Westside Kodiak ^m	197,819	262,614	291,000
Alitak ⁿ	32,763	72,497	48,000
Eastside/Northend Kodiak ^o	149,703	355,205	220,000
Mainland ^p	104,387	121,807	154,000
Subtotal	623,000	955,808	1,016,668

-continued-

Table 2.—Page 2 of 2.

FISHERY	2009 Harvest		2010 Harvest
	Projection ^b	Actual ^c	Projection ^b
Coho Salmon Fisheries			
Kitoi Bay Hatchery ^d	148,000	151,881	155,108
Afognak ⁱ	29,500	18,736	42,000
Westside Kodiak ^m	168,000	43,276	136,000
Alitak ⁿ	7,000	7,883	9,000
Eastside/Northend Kodiak ^o	50,800	57,401	51,000
Mainland ^p	18,200	9,567	20,000
Subtotal	421,500	288,744	413,108
GRAND TOTAL ^q	24,666,992	30,627,685	15,341,360

Note: Harvest projections presented in this table represent formal forecasts as well as projections based on past fishery performance.

- ^a In number of salmon (rounded to nearest hundred). Does not include subsistence, sport, personal use, or ADF&G test fish harvests.
- ^b Projected harvests for enhanced and major sockeye systems are based on the formal forecasts for those individual stocks (total run minus escapement) and the projected harvest from minor sockeye systems and other salmon species are based on less formal escapement to return relationships.
- ^c Actual harvest is the number taken in a particular geographic area, not the catch assigned to an individual salmon stock.
- ^d From the Duck Bay, Izhut Bay, and Inner and Outer Kitoi Bay sections only. Additional salmon, likely bound for the Kitoi Bay Hatchery, are harvested in parts of the Southeast Afognak Section (252-33) and Northeast Afognak Section (252-10 and 252-20) plus expected returns to Jennifer and Ruth lakes.
- ^e From the Cape Igvak Section. Early run is from the beginning of season through June 26. Late run is from July 8 through 25.
- ^f From the Southwest Afognak Section, Northwest Kodiak District (except for Spiridon and Settler Cove Terminal Harvest Areas), Inner and Outer Karluk sections, plus 50% of Halibut Bay Section from June 21 through July 15 and 100% after July 31.
- ^g From the Outer and Inner Ayakulik sections, plus 50% of Halibut Bay Section from June 21 through July 15 and 100% from July 16 through 31.
- ^h From the Alitak Bay District. Frazer and Upper Station harvest estimates are based on initial run and fishery timing and stock separation.
- ⁱ From minor systems at Inner and Outer Ugak Bay (Saltery), Buskin River, Perenos Bay (Portage), Northwest Afognak (Thorsheim & Long Lagoon), Big River (Swikshak), and Outer Kukak Bay (Kafli & Kuliuk) sections.
- ^j From the Foul Bay, Waterfall Bay, and Settler Cove Special Harvest areas.
- ^k From the Spiridon Lake Special Harvest Area (Telrod Cove), plus an estimate of Spiridon-bound sockeye taken in adjacent areas.
- ^l From the Afognak District except for the Duck, Izhut, and Inner and Outer Kitoi Bay sections.
- ^m From the Southwest Kodiak District (256- and 255-) and the Northwest Kodiak District (254- and 253-) except for the North Cape, Anton Larson, Sharatin, and Kizhuyak sections, and part of the Central Section (259-35 to 259-39).
- ⁿ From the Alitak District.
- ^o From the Eastside Kodiak District (258-, and 259-40 to 259-42), Northeast Kodiak District (259-21 to 259-25), and the North Cape, Anton Larson, Sharatin, and Kizhuyak sections, plus part of the Central Section (259-35 to 259-39).
- ^p From the Mainland District.
- ^q Includes the projected 2009 harvest of 20,000 Chinook salmon, the actual 2009 harvest of 7,219 Chinook salmon and a projected 2010 harvest of 20,000 Chinook salmon.

FIGURES

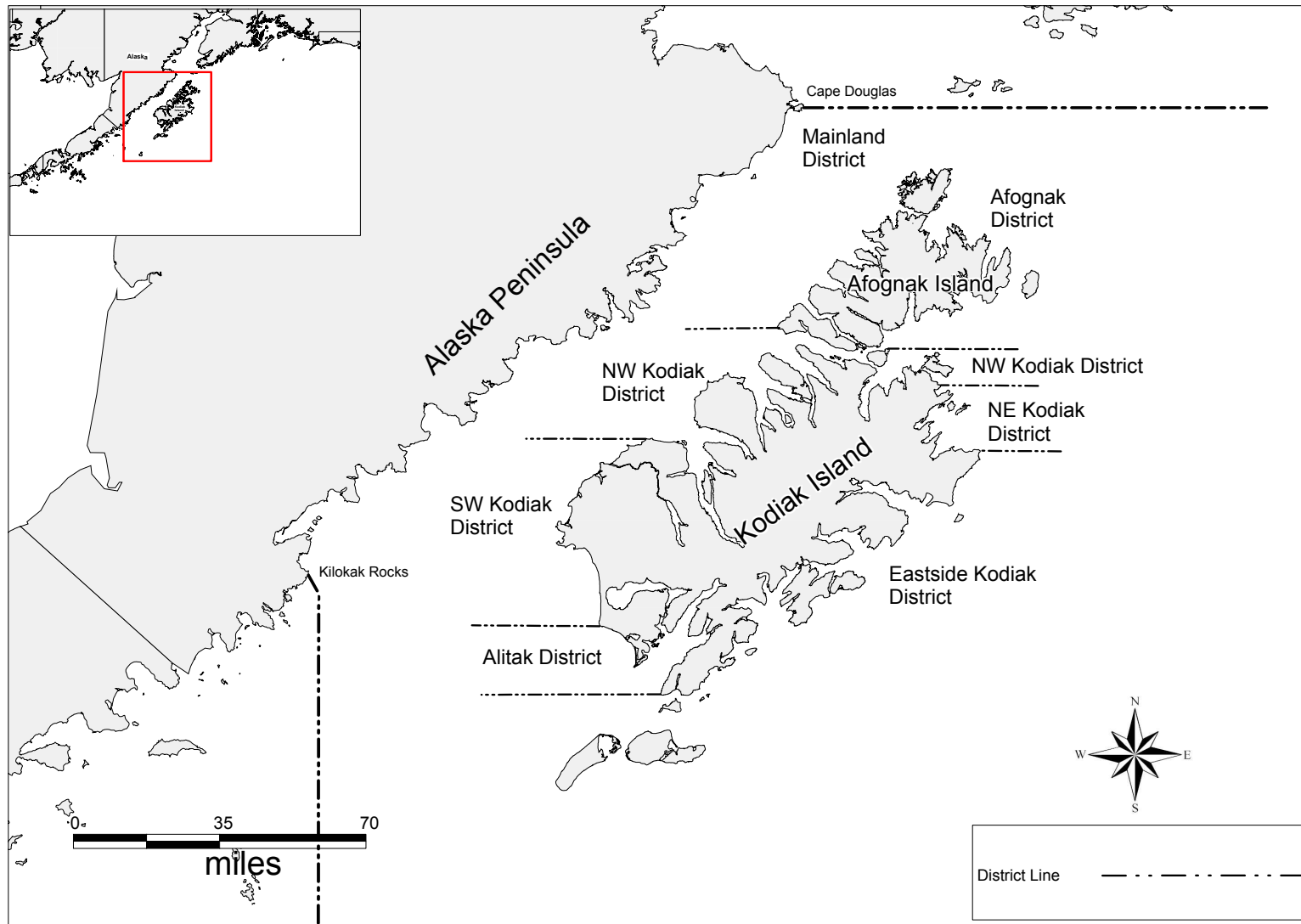


Figure 1.—Map of the commercial salmon fishing districts in the Kodiak Management Area identifying commercial salmon fishing districts.

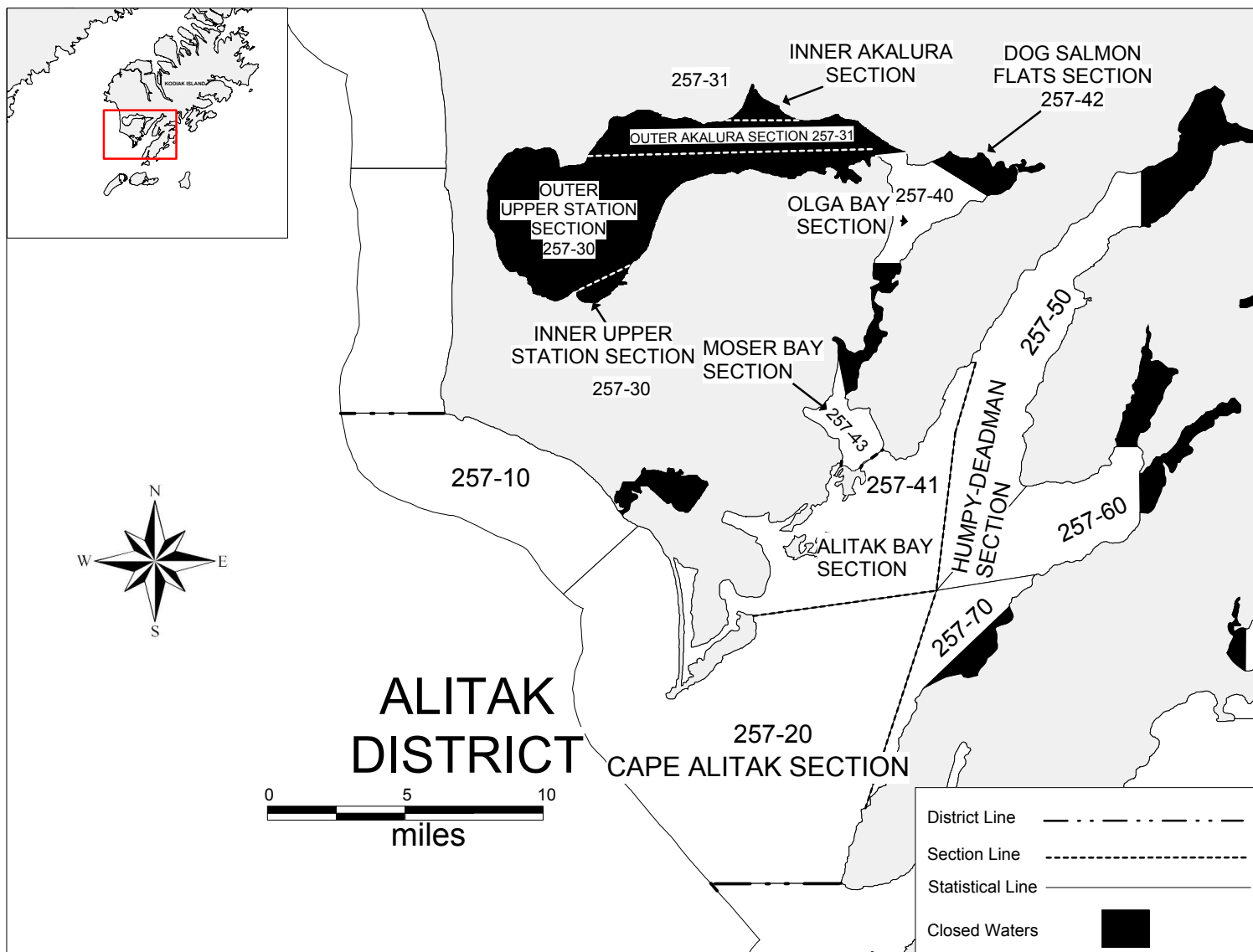


Figure 3.—Map of the Alitak District identifying commercial salmon fishing sections and statistical areas.

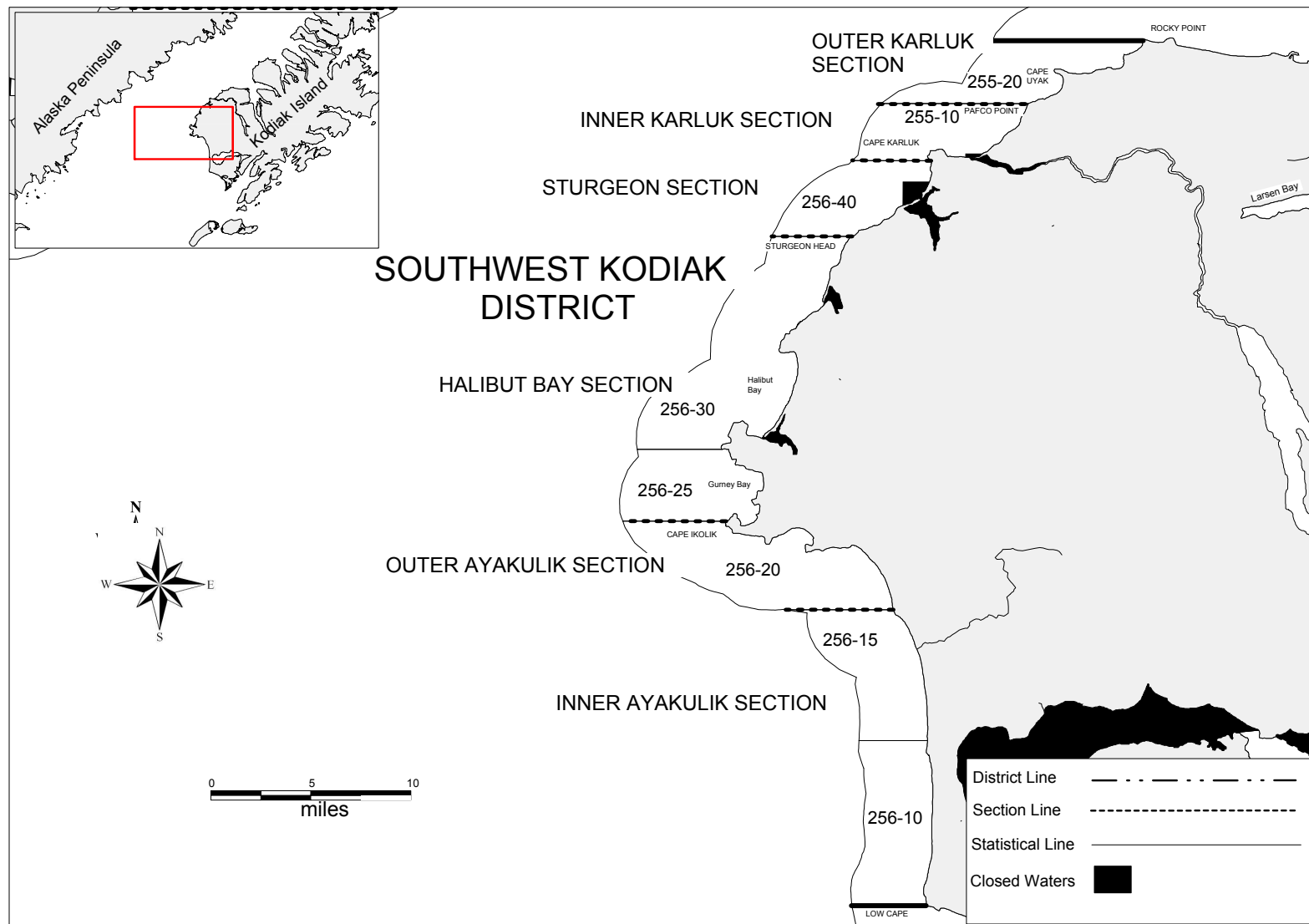


Figure 4.—Map of the Southwest Kodiak District identifying commercial salmon fishing sections and statistical areas.

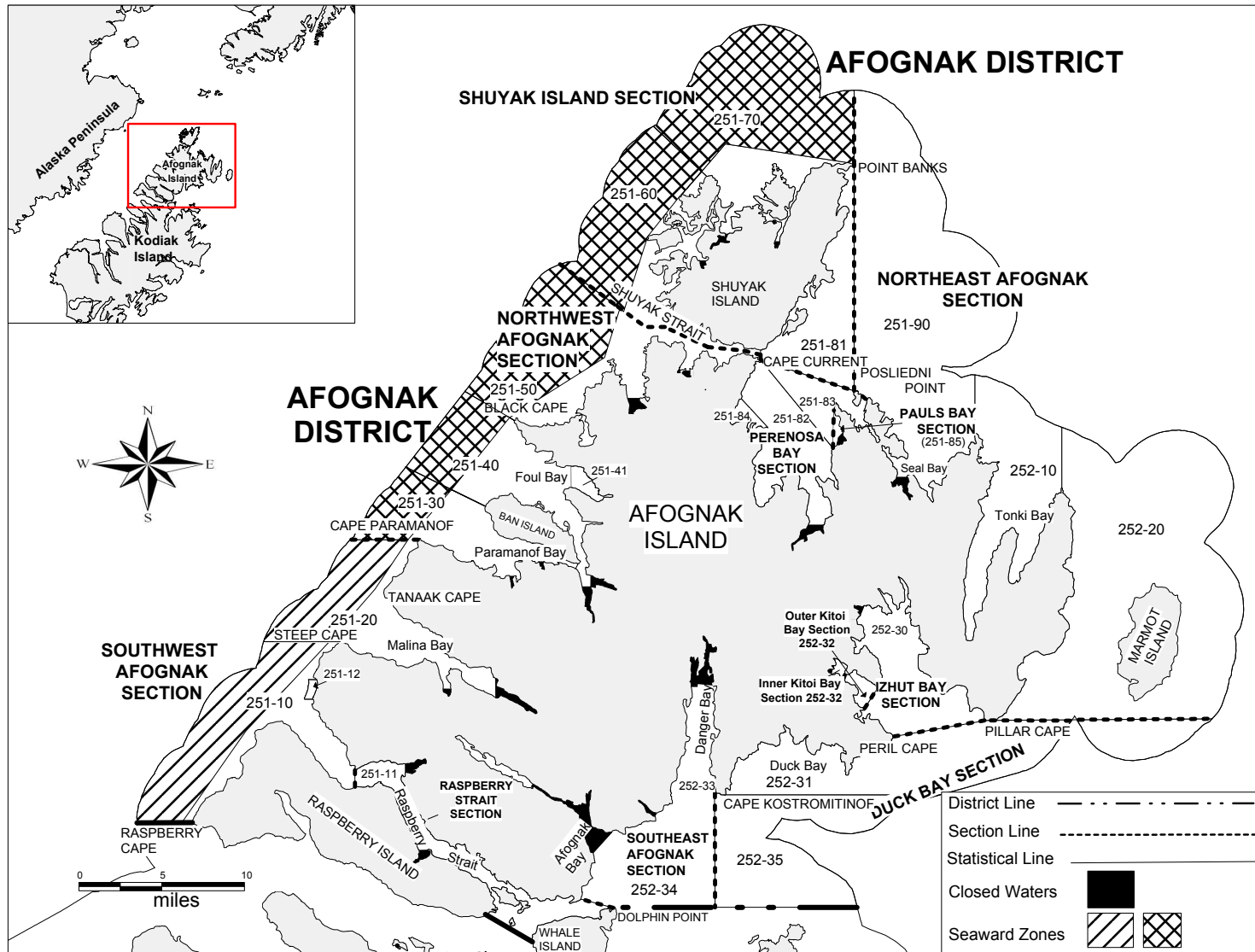


Figure 5.—Map of the Afognak District identifying commercial salmon fishing sections and statistical areas.

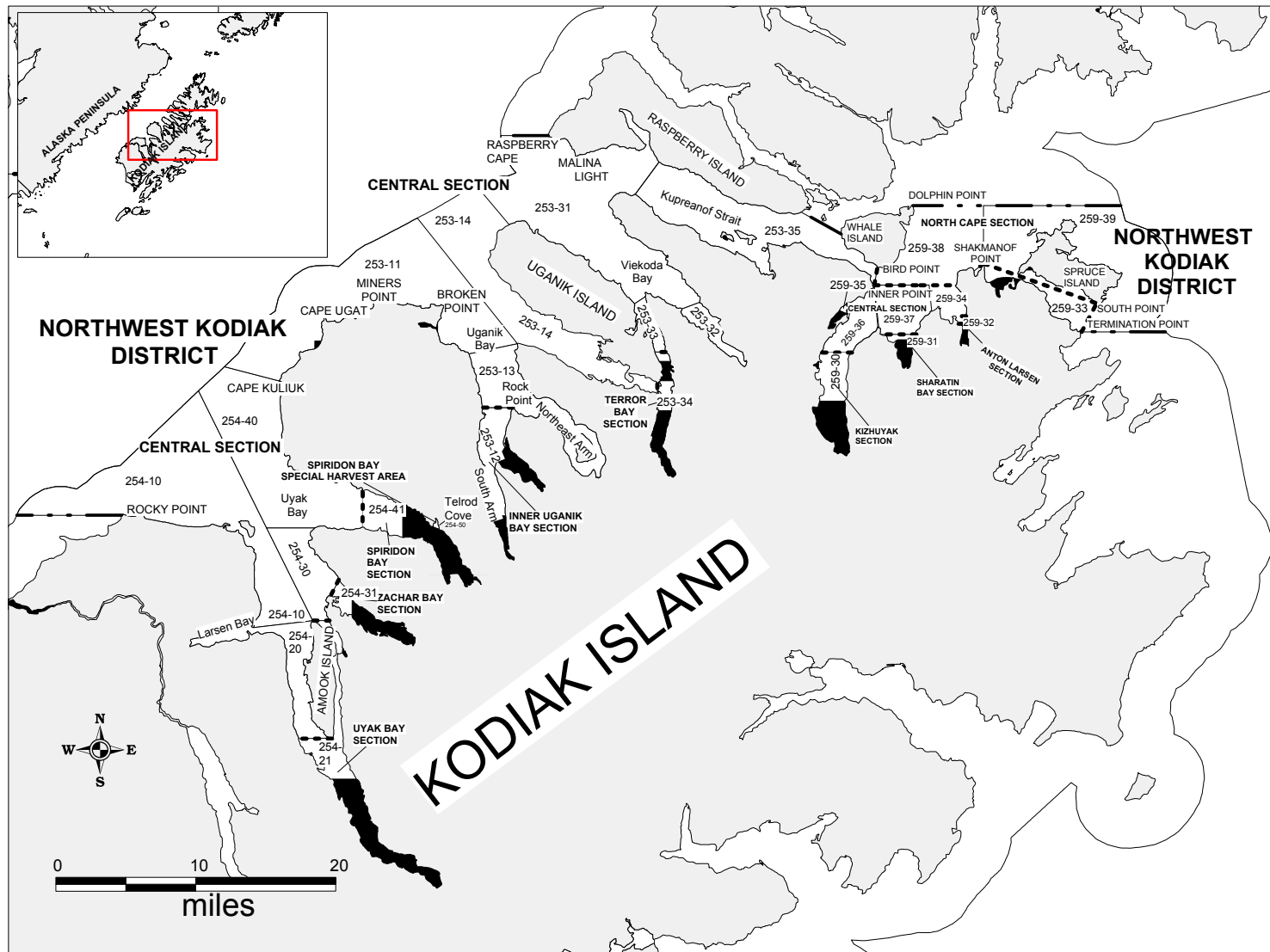


Figure 6.—Map of the Northwest Kodiak District identifying commercial salmon fishing sections and statistical areas.

Figure 7.—Map of the Eastside Kodiak District identifying commercial salmon fishing sections and statistical areas.

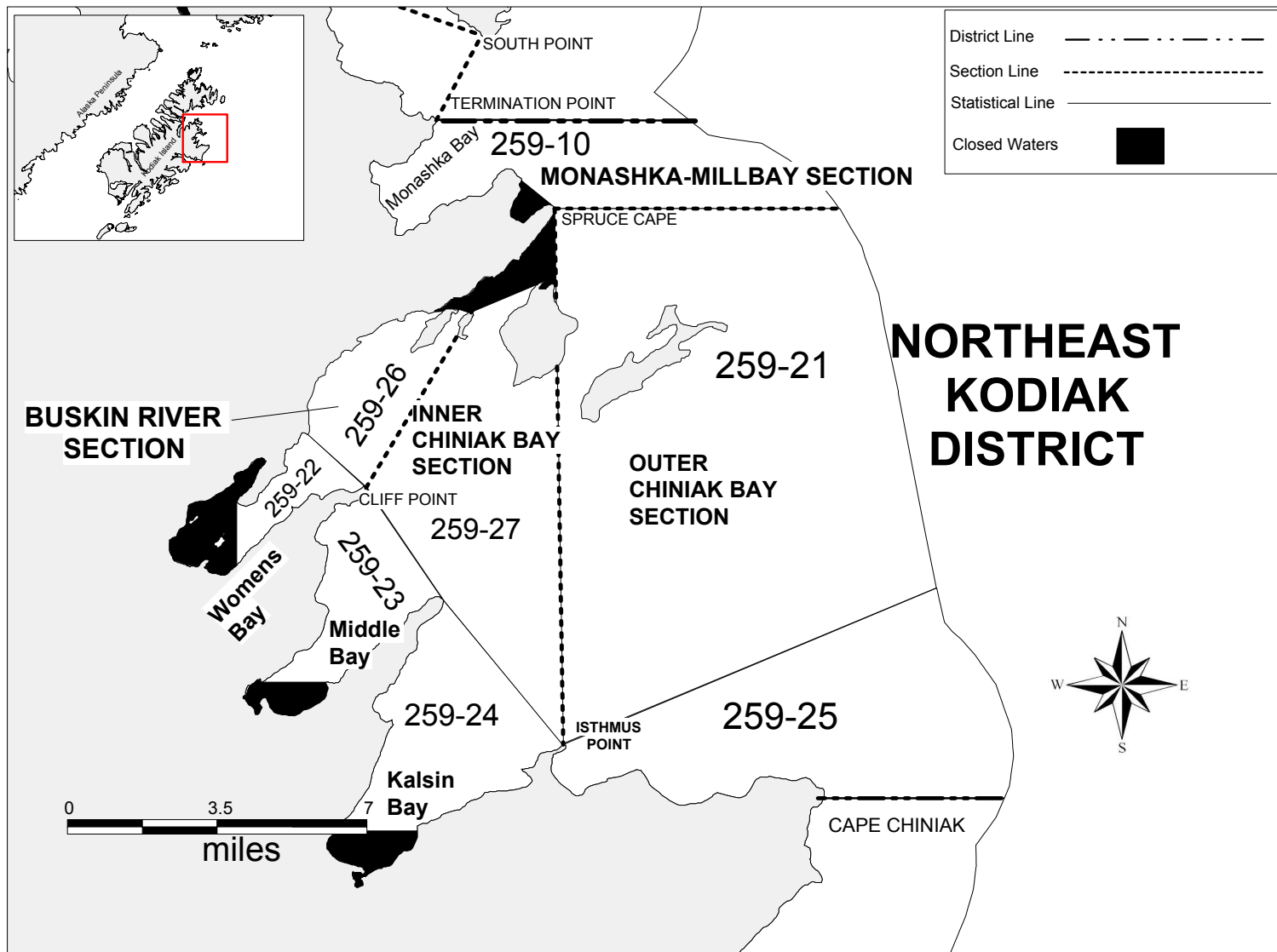


Figure 8.—Map of the Northeast Kodiak District identifying commercial salmon fishing sections and statistical areas.

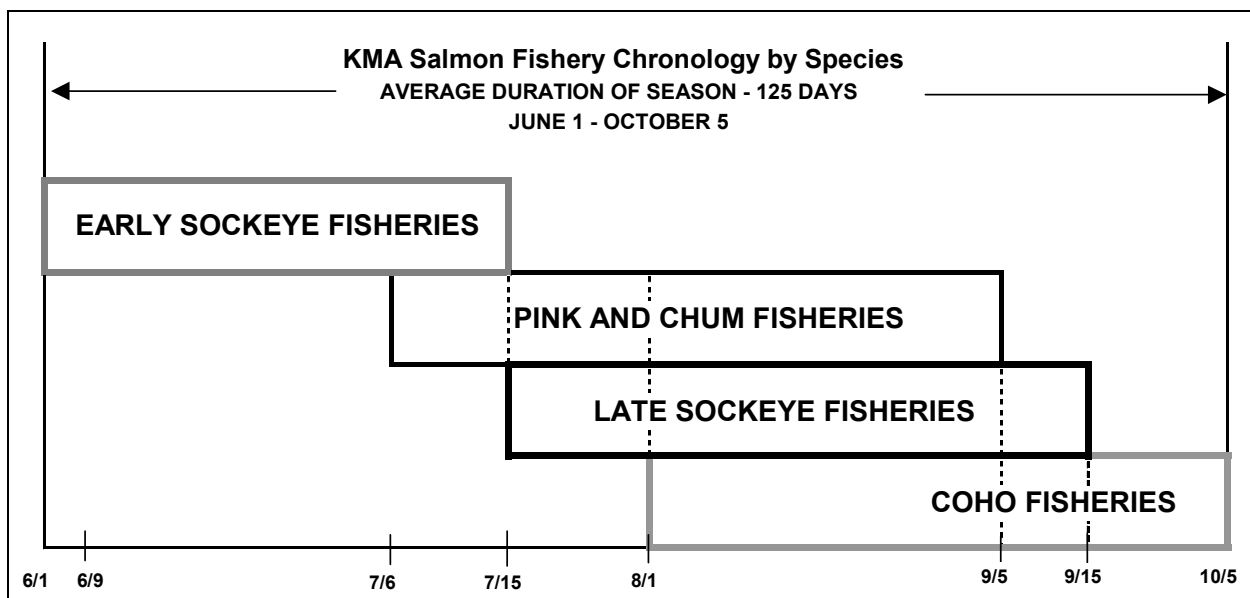
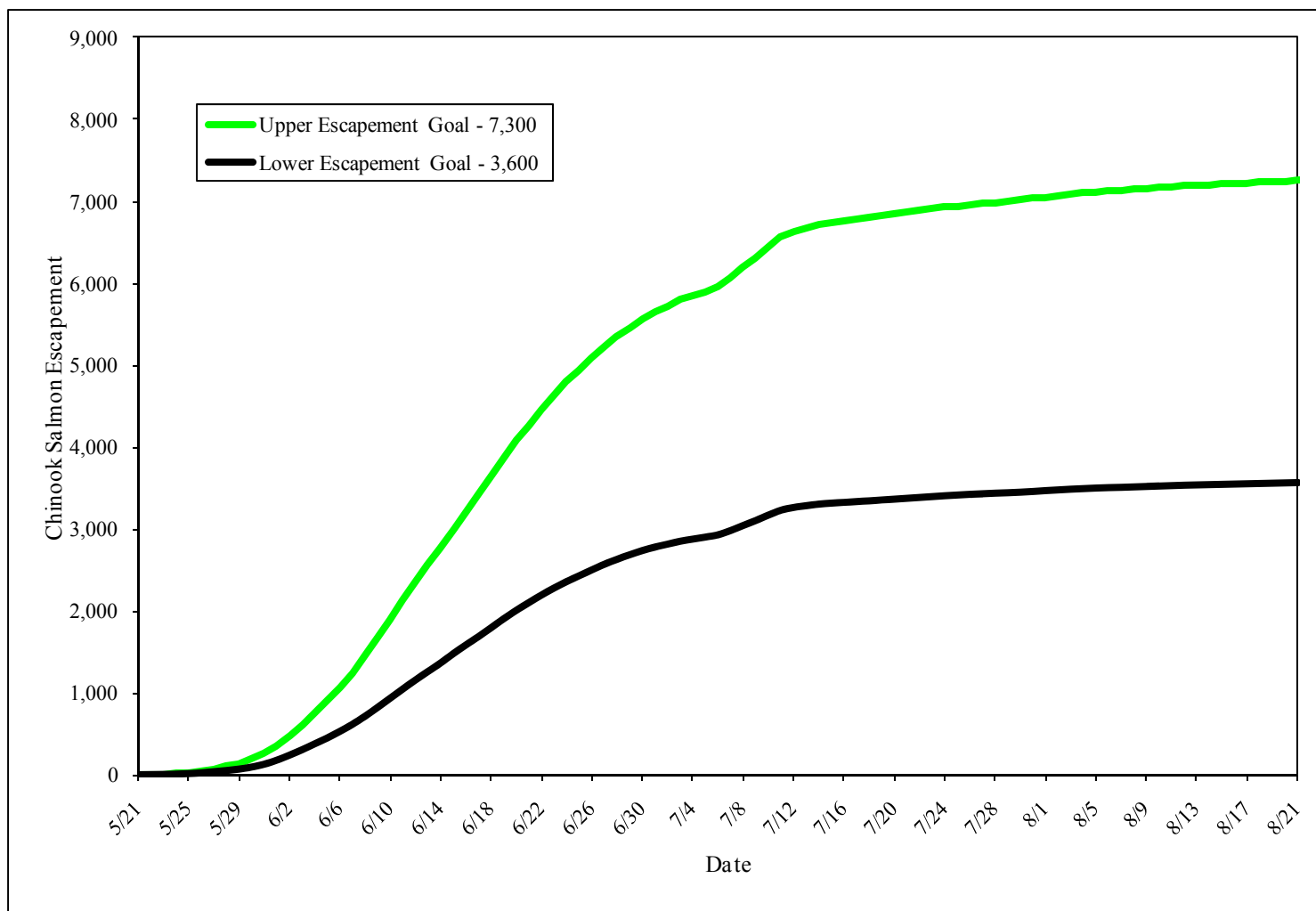


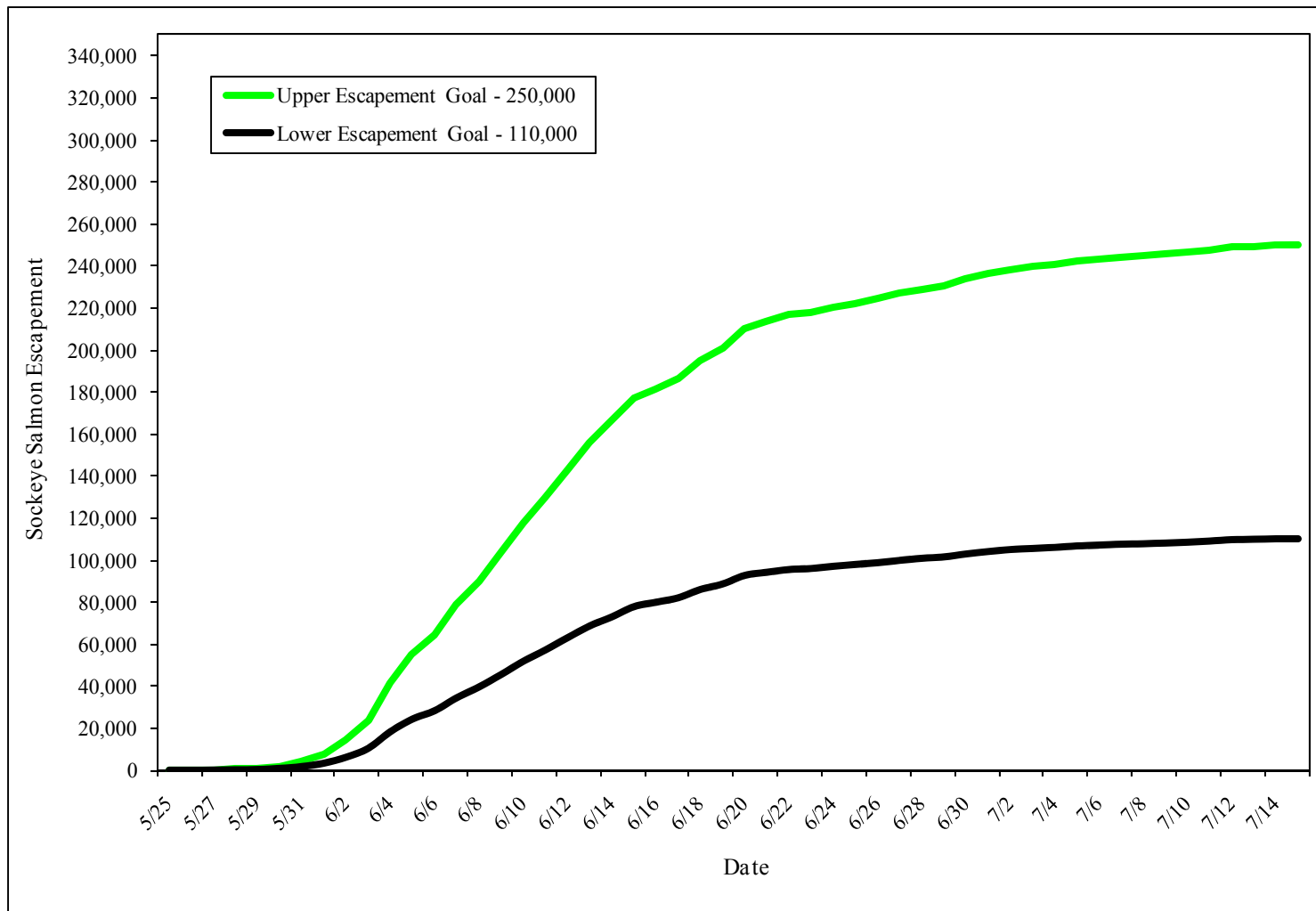
Figure 9.—Commercial salmon fishery chronology by species, for the Kodiak Management Area.

**APPENDIX A. CHARTS OF AVERAGE RUN TIMING
RELATIVE TO CURRENT ESCAPEMENT GOALS FOR
SELECT STREAMS AND SPECIES**



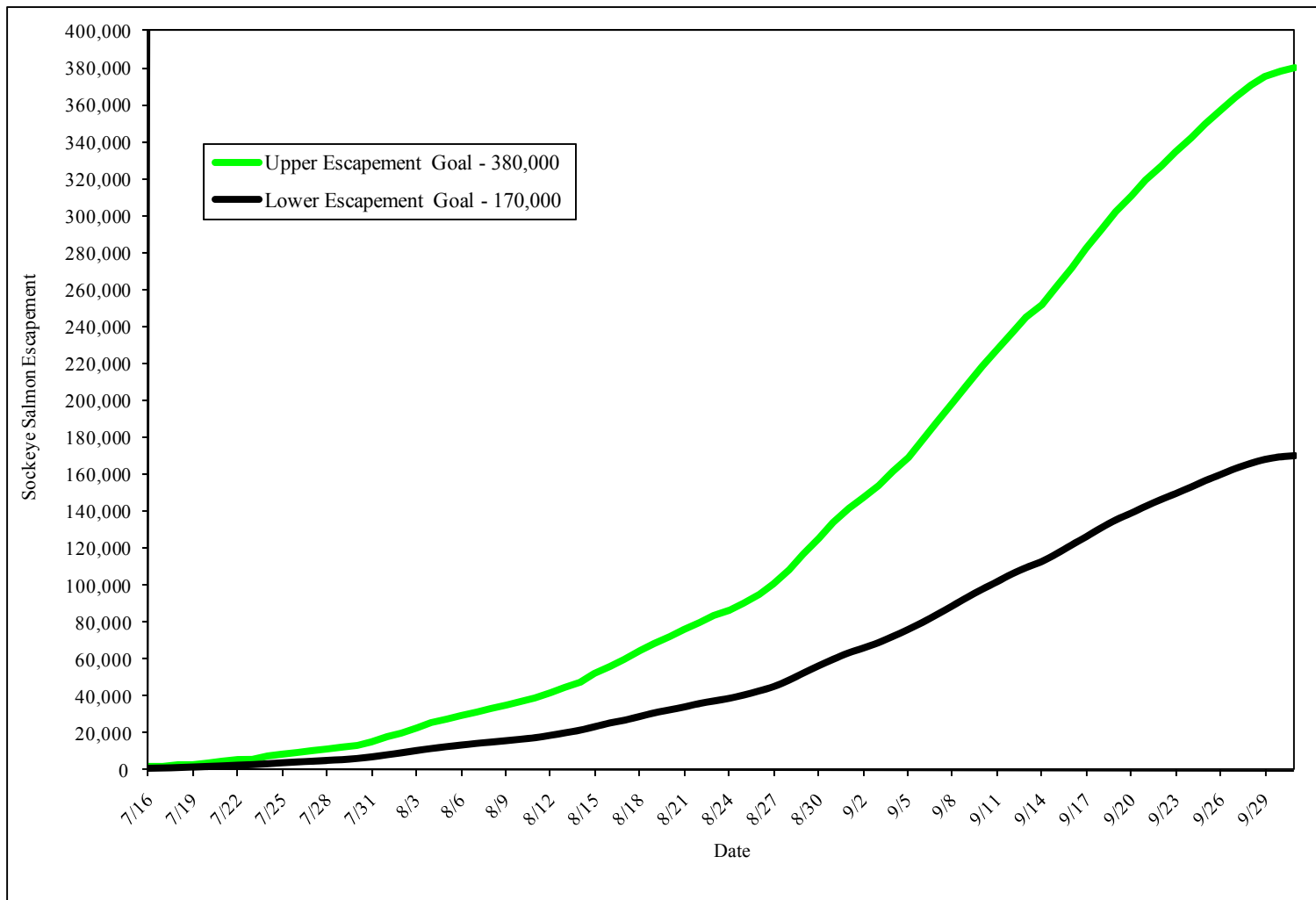
Note: This chart does not represent interim escapement goals.

Appendix A1.—Average run timing relative to lower and upper escapement goals for Chinook salmon into the Karluk system.



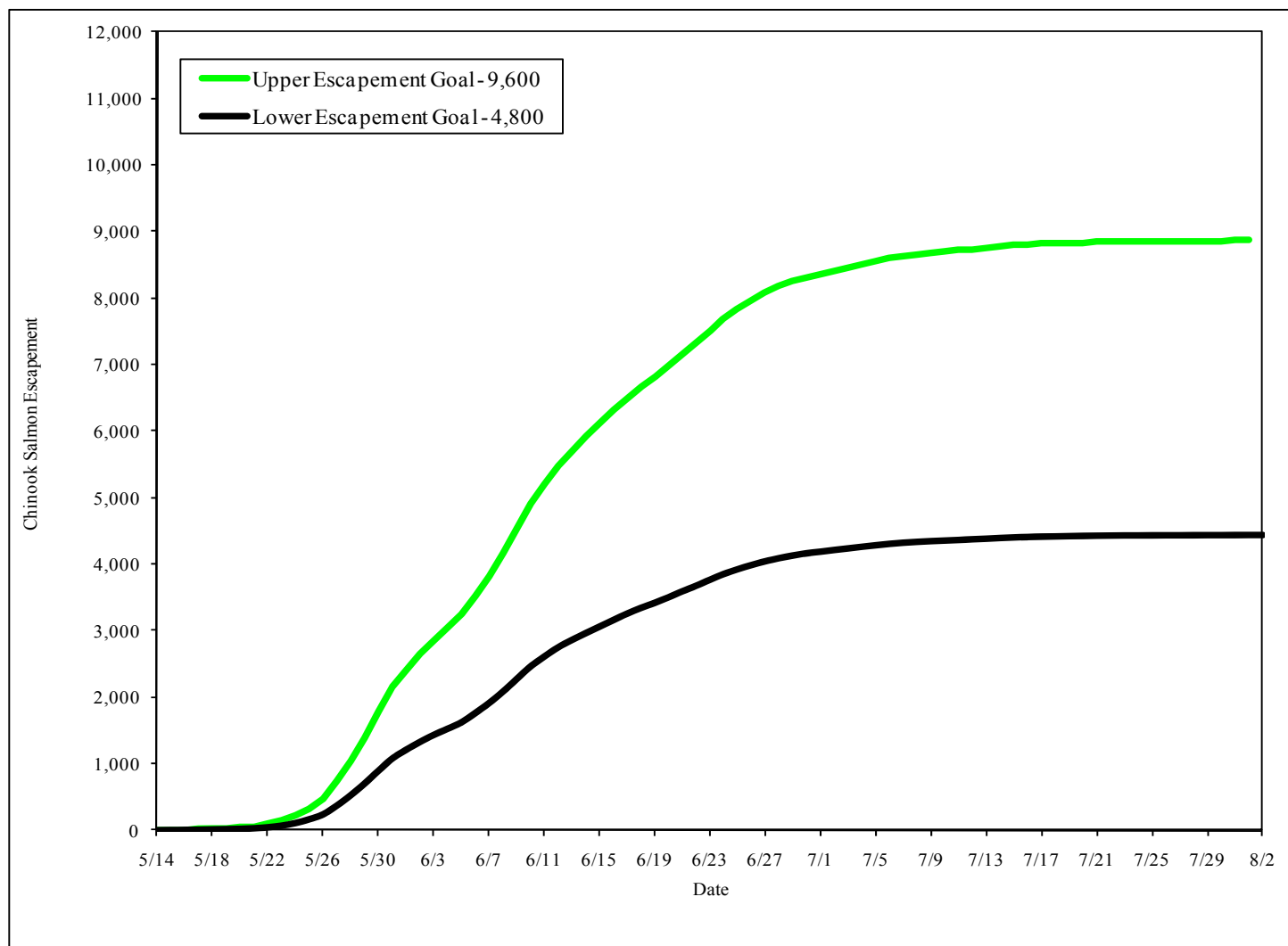
Note: This chart does not represent interim escapement goals.

Appendix A2.—Average run timing relative to lower and upper escapement goals for early-run sockeye salmon into the Karluk system.



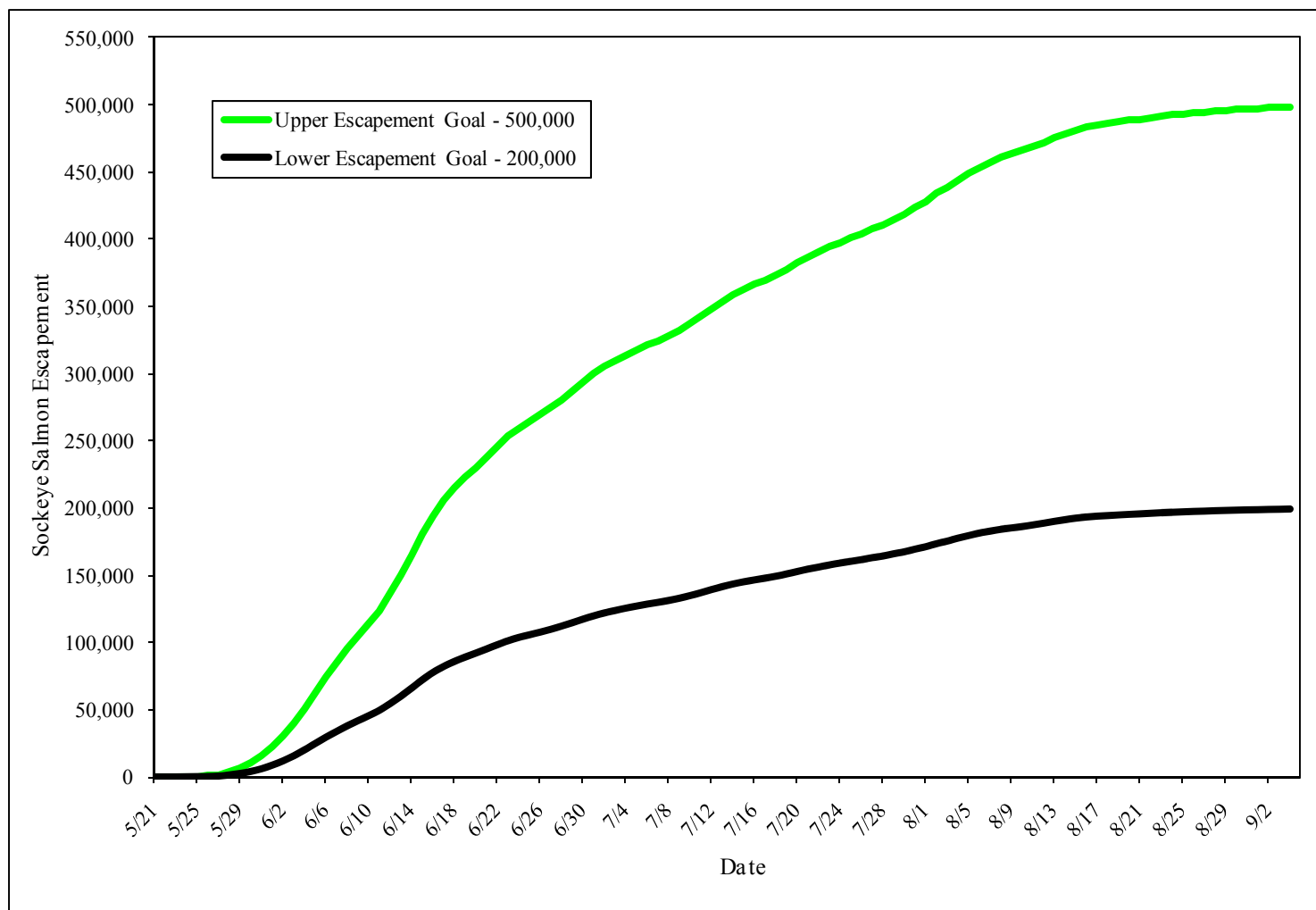
Note: This chart does not represent interim escapement goals.

Appendix A3.—Average run timing relative to lower and upper escapement goals for late-run sockeye salmon into the Karluk system.



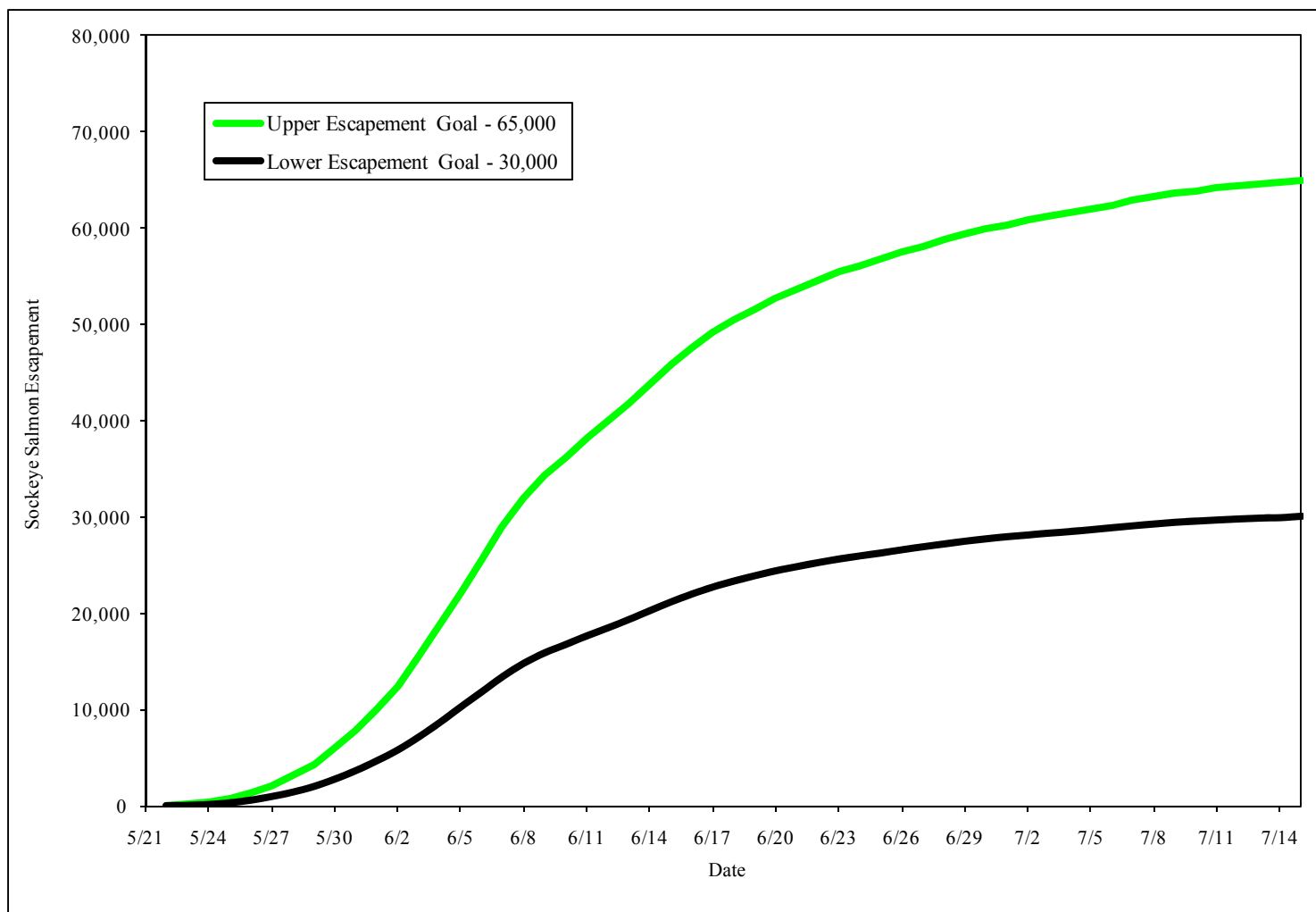
Note: This chart does not represent interim escapement goals.

Appendix A4.—Average run timing relative to lower and upper escapement goals for Chinook salmon into the Ayakulik system.



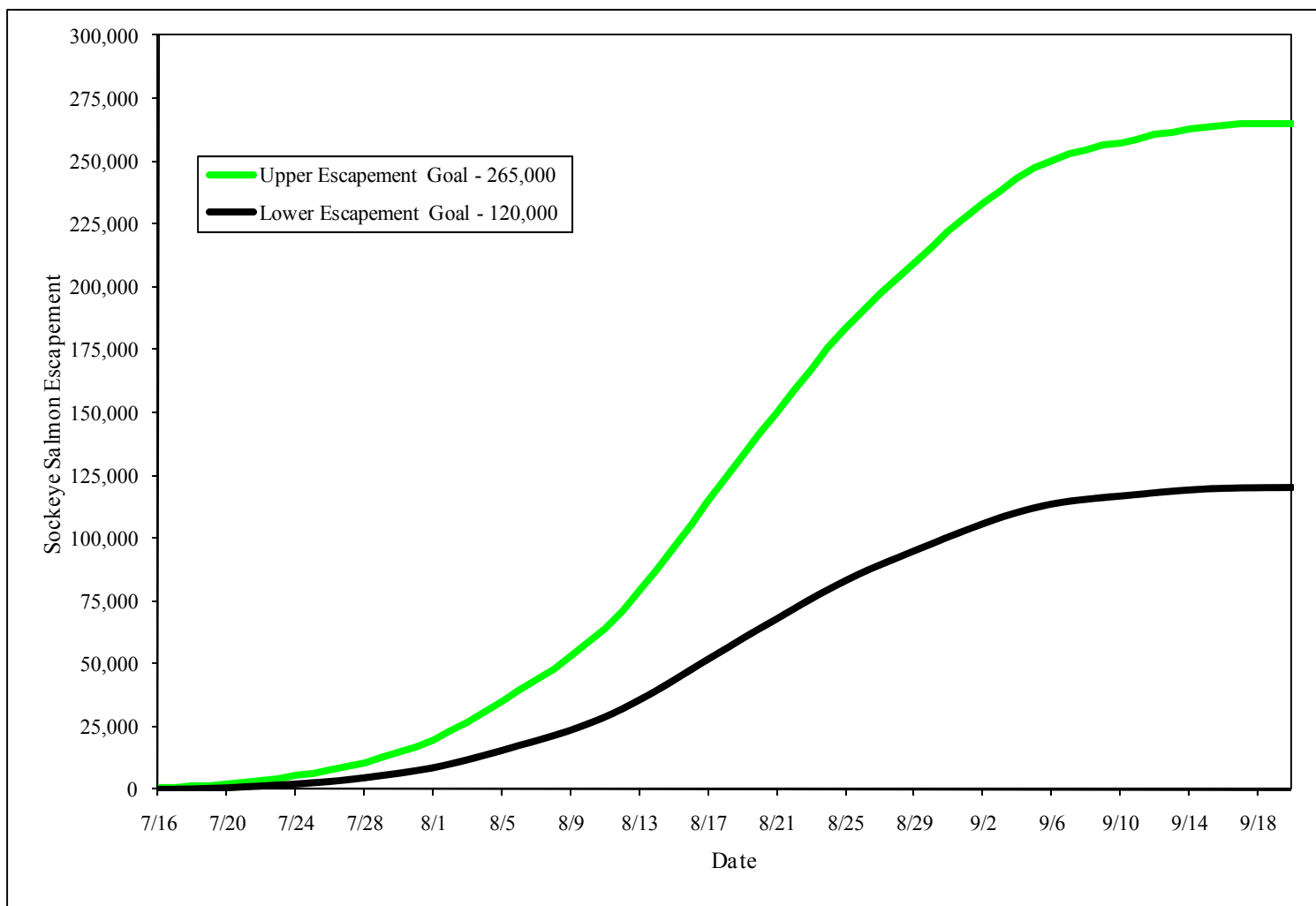
Note: This chart does not represent interim escapement goals.

Appendix A5.—Average run timing relative to lower and upper escapement goals for sockeye salmon into the Ayakulik system.



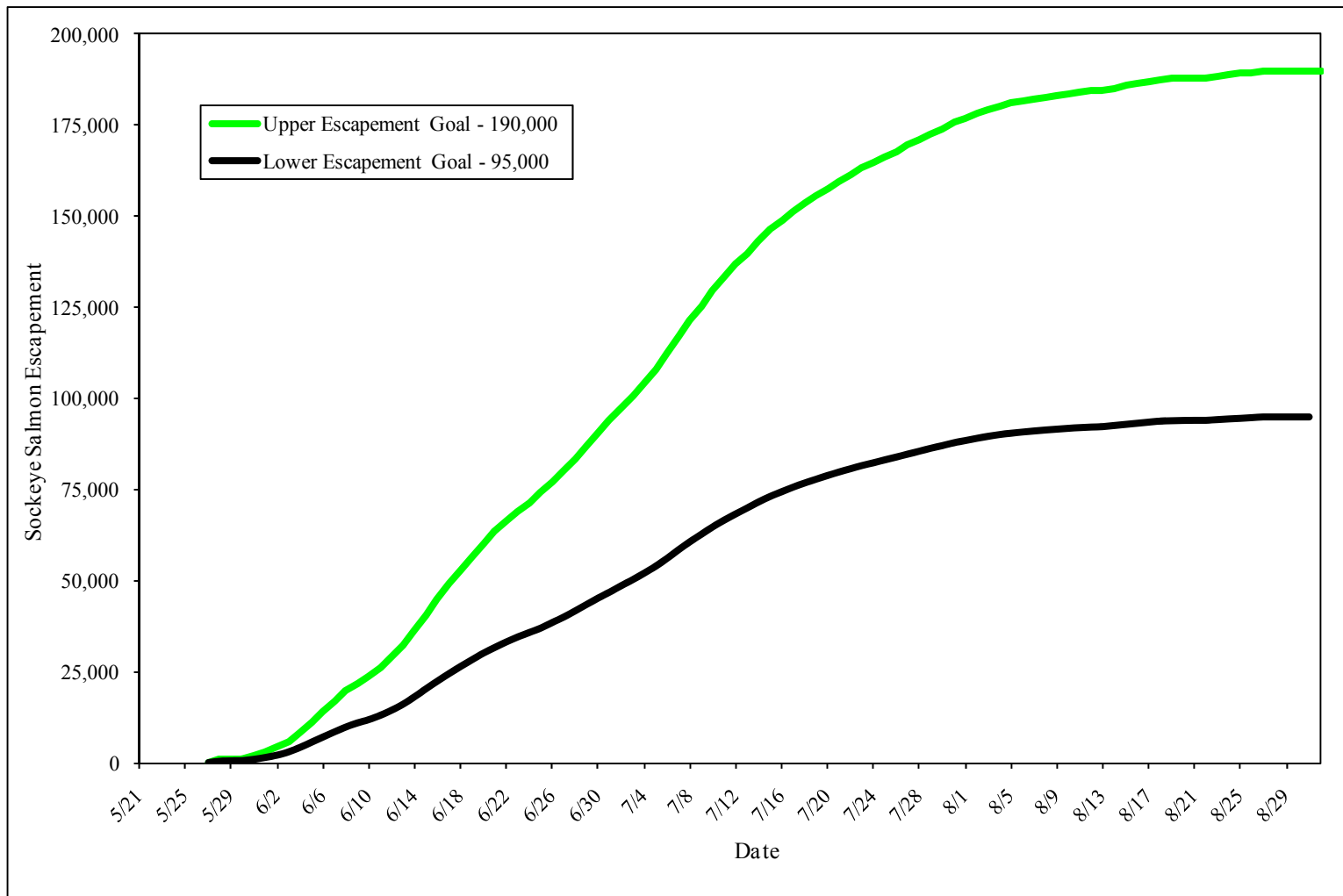
Note: This chart does not represent interim escapement goals.

Appendix A6.—Average run timing relative to lower and upper escapement goals for early-run sockeye salmon into the Upper Station system.



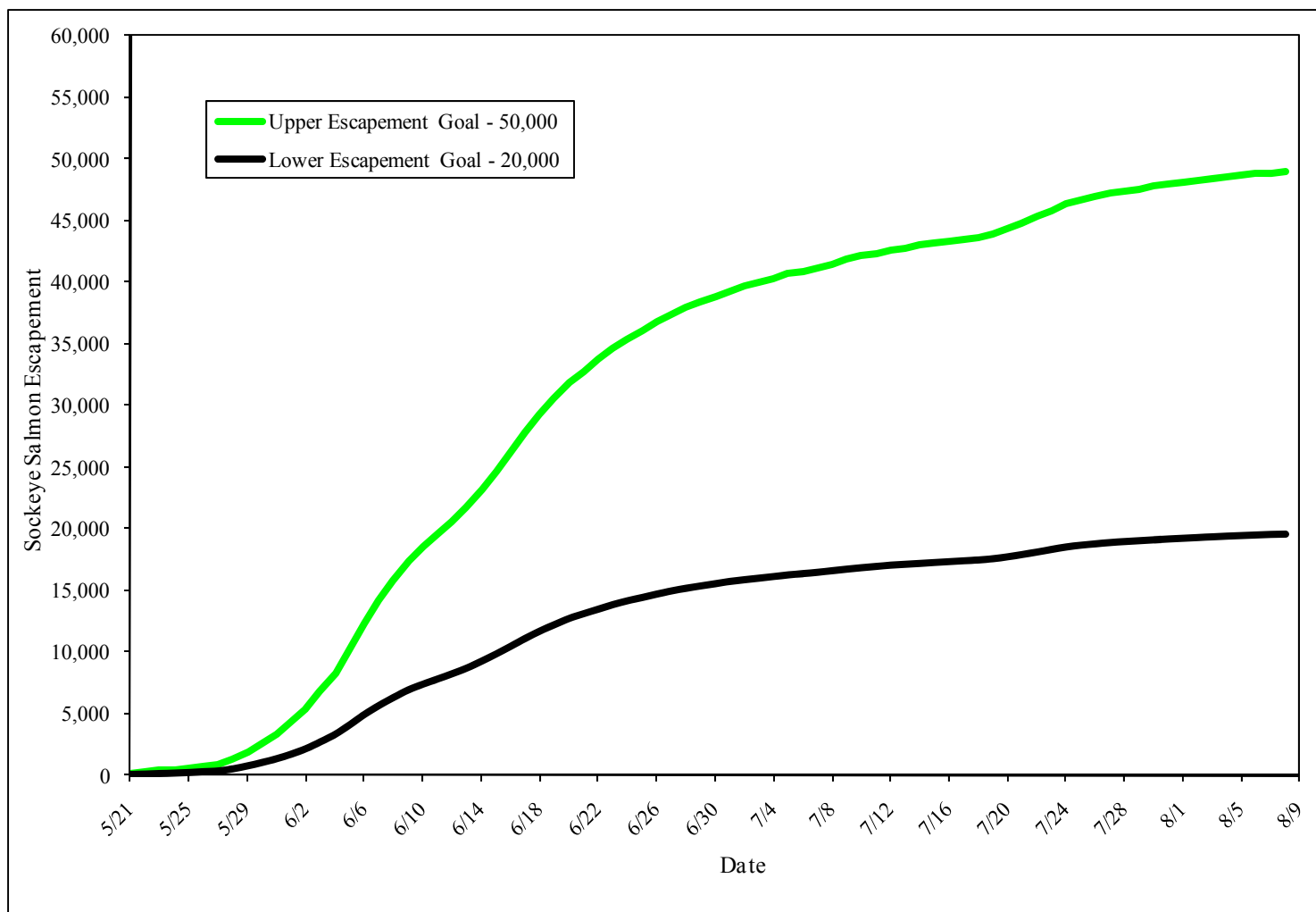
Note: This chart does not represent interim escapement goals.

Appendix A7.—Average run timing relative to lower and upper escapement goals for late-run sockeye salmon into the Upper Station system.



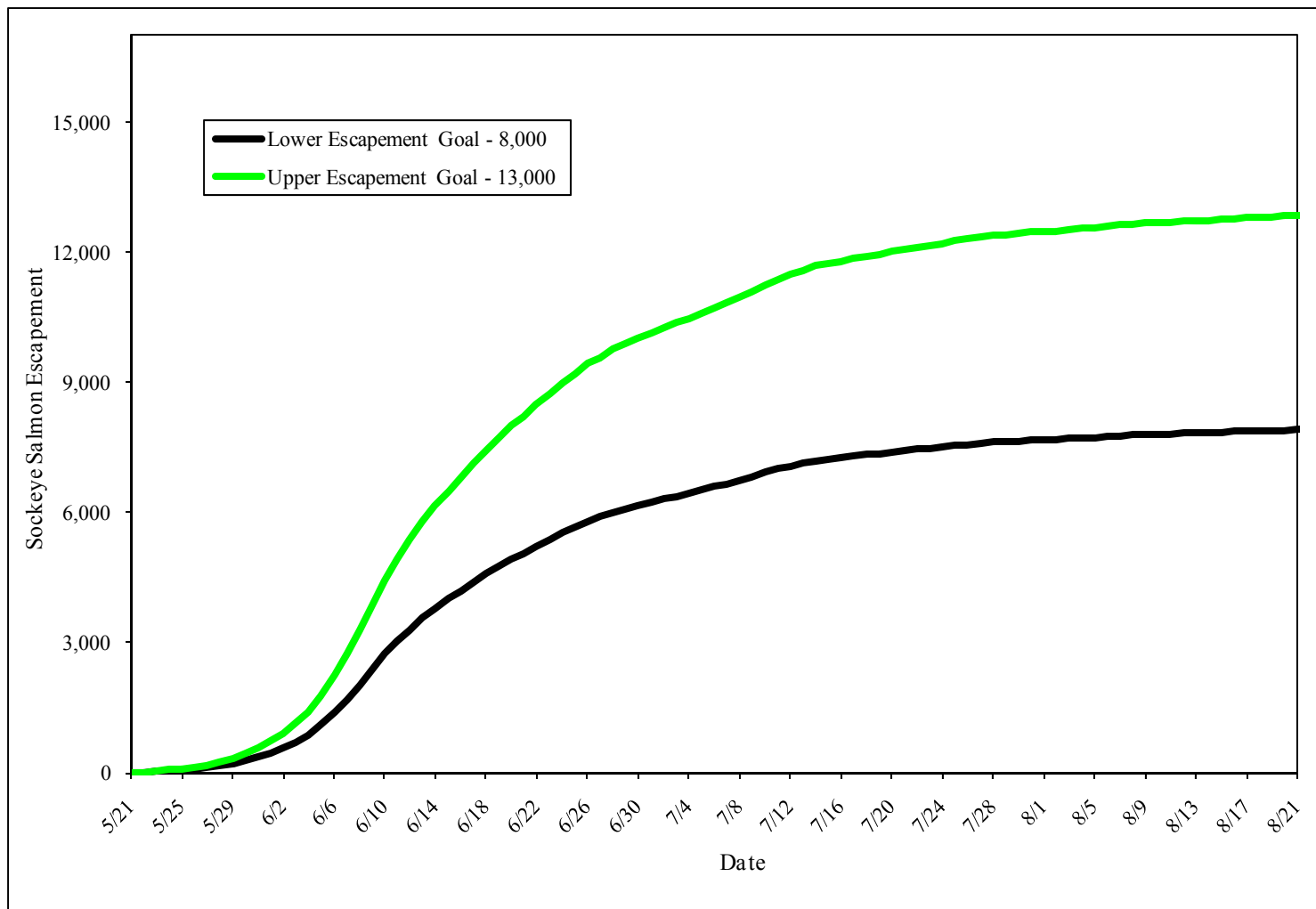
Note: This chart does not represent interim escapement goals.

Appendix A8.—Average run timing relative to lower and upper escapement goals for sockeye salmon into the Frazer system through the Dog Salmon River weir.



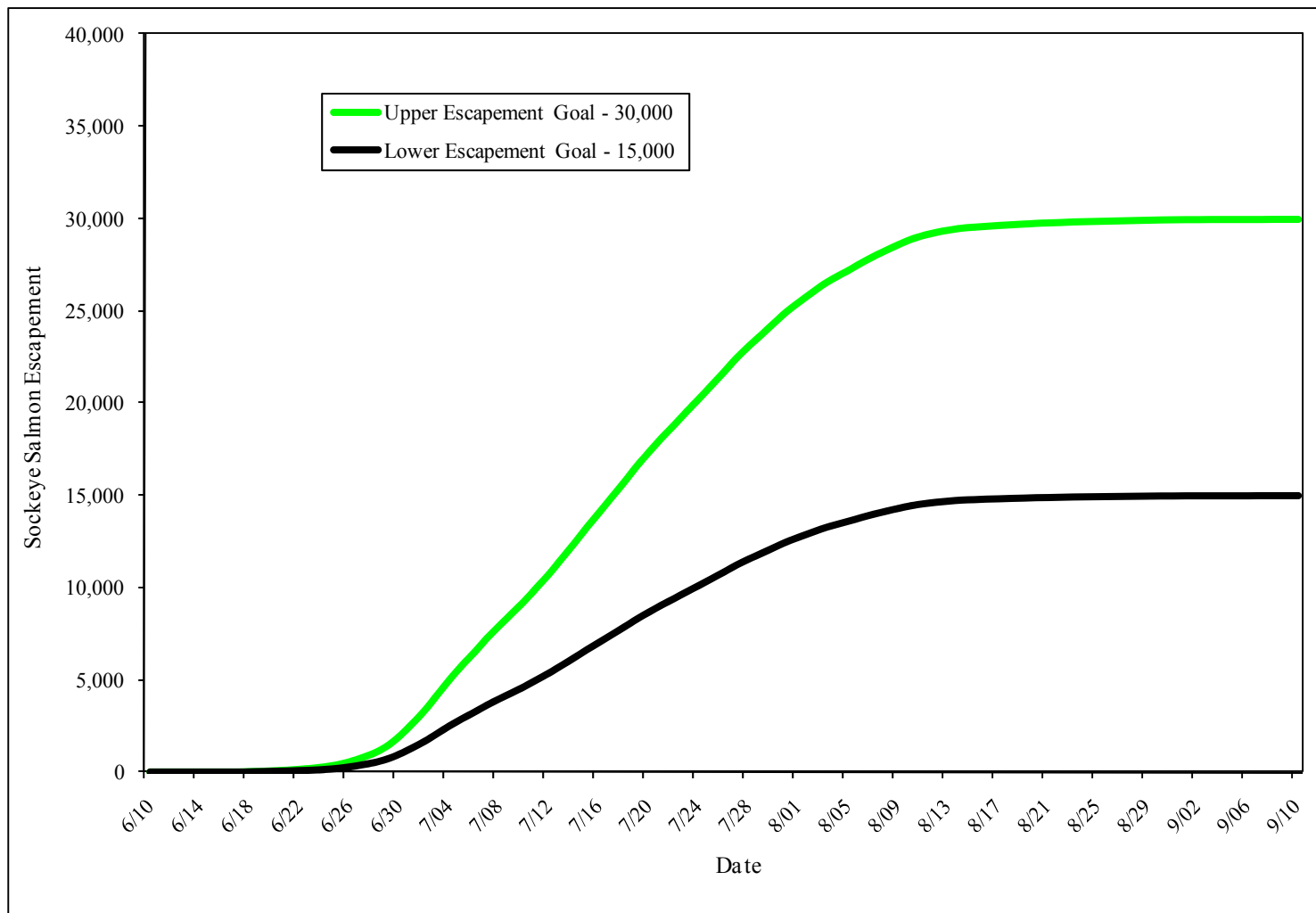
Note: This chart does not represent interim escapement goals.

Appendix A9.—Average run timing relative to lower and upper escapement goals for sockeye salmon into the Litnik system.



Note: This chart does not represent interim escapement goals.

Appendix A10.—Average run timing relative to lower and upper escapement goals for sockeye salmon into the Buskin system.



Note: This chart does not represent interim escapement goals.

Appendix A11.—Average run timing relative to lower and upper escapement goals for sockeye salmon into the Sallery system.